

GenCore version 5.1.6
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OM protein - protein search, using sw model

Run on: January 14, 2004, 07:09:10 ; Search time 39.9363 Seconds
(without alignments)
1311.583 Million cell updates/sec

Title: US-09-864-675-2
Perfect score: 1749
Sequence: 1 MRRDPAPGFSMLLFGVSLAC.....PGTGVSSSQWSTSPSTLDLN 330

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 1107863 seqs, 158726573 residues

Total number of hits satisfying chosen parameters: 1107863

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : A_Geneseq_19Jun03:*

- 1: /SIDS1/gcgdata/geneseq/geneseqp-embl/AA1980.DAT:*
- 2: /SIDS1/gcgdata/geneseq/geneseqp-embl/AA1981.DAT:*
- 3: /SIDS1/gcgdata/geneseq/geneseqp-embl/AA1982.DAT:*
- 4: /SIDS1/gcgdata/geneseq/geneseqp-embl/AA1983.DAT:*
- 5: /SIDS1/gcgdata/geneseq/geneseqp-embl/AA1984.DAT:*
- 6: /SIDS1/gcgdata/geneseq/geneseqp-embl/AA1985.DAT:*
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- 9: /SIDS1/gcgdata/geneseq/geneseqp-embl/AA1988.DAT:*
- 10: /SIDS1/gcgdata/geneseq/geneseqp-embl/AA1989.DAT:*
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- 12: /SIDS1/gcgdata/geneseq/geneseqp-embl/AA1991.DAT:*
- 13: /SIDS1/gcgdata/geneseq/geneseqp-embl/AA1992.DAT:*
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- 15: /SIDS1/gcgdata/geneseq/geneseqp-embl/AA1994.DAT:*
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- 18: /SIDS1/gcgdata/geneseq/geneseqp-embl/AA1997.DAT:*
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- 22: /SIDS1/gcgdata/geneseq/geneseqp-embl/AA2001.DAT:*
- 23: /SIDS1/gcgdata/geneseq/geneseqp-embl/AA2002.DAT:*
- 24: /SIDS1/gcgdata/geneseq/geneseqp-embl/AA2003.DAT:*

Pred. No. is the number of results predicted by chance to have a
score greater than or equal to the score of the result being printed,

and is derived by analysis of the total score distribution.

SUMMARIES

8							
Result	Query						
No.	Score	Match	Length	DB	ID	Description	
1	1749	100.0	330	23	AAU11635	Human Neuregulin-2	
2	1749	100.0	422	23	ABB07894	Human neuregulin 2	
3	1722	98.5	330	18	AAW27537	Rat cerebellum der	
4	1720	98.3	426	23	ABB07893	Human neuregulin 2	
5	1575	90.1	860	19	AAW63700	Receptor type tyro	
6	1505	86.0	298	23	AAU11636	Human Neuregulin-2	
7	1478	84.5	754	18	AAW27536	Rat cerebellum der	
8	960	54.9	181	19	AAW48380	Mus musculus don-1	
9	960	54.9	181	24	ABG71637	Murine secreted sp	
10	881	50.4	469	24	ABG71639	Human second splic	
11	881	50.4	647	19	AAW48383	Homo sapiens don-1	
12	881	50.4	647	24	ABG71644	Human third splice	
13	875	50.0	469	19	AAW48382	Homo sapiens don-1	
14	842	48.1	407	19	AAW48381	Homo sapiens don-1	
15	842	48.1	407	24	ABG71638	Human membrane-bou	
16	821	46.9	605	24	ABG71636	Murine membrane-bo	
17	816	46.7	605	19	AAW48379	Mus musculus don-1	
18	748	42.8	139	19	AAW48388	Undefined don-1 ho	
19	748	42.8	139	24	ABG71645	Don-1 associated p	
20	688	39.3	182	18	AAW27538	Human cerebellum d	
21	524	30.0	422	22	AAG67901	Human neuregulin g	
22	524	30.0	422	22	AAG67939	Human neuregulin g	
23	523	29.9	422	16	AAR67258	Human glial cell g	
24	523	29.9	422	17	AAW09371	Human neuregulin G	
25	523	29.9	422	17	AAW09372	Human GGF2. Homo	
26	523	29.9	422	17	AAR96081	Glial growth facto	
27	523	29.9	422	17	AAR87466	Glial growth facto	
28	523	29.9	422	17	AAR86628	Mature hGGF2. Hom	
29	522	29.8	422	15	AAR55654	GGF-II encoded by	
30	522	29.8	422	15	AAR46923	GGF-II encoded by	
31	521	29.8	418	23	ABJ00011	Human neuregulin-1	
32	521	29.8	418	23	ABJ00049	Human neuregulin-1	
33	508	29.0	422	17	AAR87467	Glial growth facto	
34	485	27.7	782	22	AAB67751	Amino acid sequenc	
35	474	27.1	855	22	AAB67757	Amino acid sequenc	
36	460	26.3	342	22	AAB67754	Amino acid sequenc	
37	452	25.8	323	22	AAB67753	Amino acid sequenc	
38	450	25.7	317	22	AAB67752	Amino acid sequenc	
39	354	20.2	204	22	AAG67902	Human neuregulin-1	
40	354	20.2	204	22	AAG67940	Human neuregulin-1	
41	354	20.2	204	23	ABJ00012	Human neuregulin-1	
42	354	20.2	204	23	ABJ00050	Human neuregulin-1	
43	353.5	20.2	263	17	AAW09360	Bovine neuregulin	
44	353	20.2	280	16	AAR67244	Bovine glial cell	
45	353	20.2	280	17	AAW09369	Human neuregulin G	

ALIGNMENTS

RESULT 1

AAU11635

ID AAU11635 standard; Protein; 330 AA.

XX

AC AAU11635;

XX

DT 12-MAR-2002 (first entry)

XX

DE Human Neuregulin-2alpha, NRG-2alpha.

XX

KW Human; neuregulin-2; NRG-2alpha; NRG-2beta; mitogenesis;

KW cell survival; cell growth; cell differentiation; erbB receptor;

KW cardiomyopathy; ischaemic damage; cardiac trauma; heart failure;

KW atherosclerosis; vascular lesion; vascular hypertension;

KW degenerative congenital vascular disease; myasthenia gravis;

KW neurodegenerative disorder; peripheral neuropathy;

KW sensory nerve fiber neuropathy; motor fiber neuropathy;

KW sensory nerve fiber neuropathy; multiple sclerosis;

KW amyotrophic lateral sclerosis; spinal muscular atrophy; nerve injury;

KW Alzheimer's disease; Parkinson's disease; cerebellar ataxia;

KW spinal cord injury; tumour; neurofibromatosis; transgenic animal.

XX

OS Homo sapiens.

XX

PN WO200189568-A1.

XX

PD 29-NOV-2001.

XX

PF 23-MAY-2001; 2001WO-US16896.

XX

PR 23-MAY-2000; 2000US-206495P.

XX

PA (CENE-) CENES PHARM INC.

XX

PI Marchionni MA;

XX

DR WPI; 2002-097612/13.

DR N-PSDB; AAS18019.

XX

PT Neuregulin-2 polypeptide and polynucleotide useful for treating

PT multiple sclerosis, spinal muscular atrophy, nerve injury, Alzheimer's

PT disease, by increasing mitogenesis, survival, growth or differentiation

PT of a cell -

XX

PS Claim 53; Fig 7; 79pp; English.

XX

CC The invention relates to a substantially pure neuregulin (NRG)-2

CC polypeptide comprising or consisting of a sequence for human

CC NRG-2alpha or NRG-2beta (clone 2b7) and the polynucleotides encoding

CC the. Also included are a vector expressing the protein, a host cell

CC comprising the vector, a transgenic non-human animal transformed with

CC the vector or having a knockout mutation in one or both NRG-2

CC alleles and an anti-NRG-2 antibody. Analysis of mutations in NRG-2 in an

CC individual is useful for diagnosing an increased likelihood of

CC developing a NRG-2-related disease or condition in a test subject.

CC NRG-2 is useful for increasing the mitogenesis, survival, growth or

CC differentiation of a cell (e.g. a neuronal cell), where the cell

CC expresses an erbB receptor. NRG-2 is useful for treating diseases
 CC and disorders such as cardiomyopathy (preferably degenerative congenital
 CC disease), ischaemic damage, cardiac trauma or heart failure or which
 CC has a condition affecting smooth muscle which include atherosclerosis,
 CC vascular lesion, vascular hypertension, and degenerative congenital
 CC vascular disease, myasthenia gravis, a neurodegenerative disorder,
 CC peripheral neuropathy, a sensory nerve fiber neuropathy, a motor fiber
 CC and a sensory nerve fiber neuropathy, multiple sclerosis, amyotrophic
 CC lateral sclerosis, spinal muscular atrophy, nerve injury, Alzheimer's
 CC disease, Parkinson's disease, cerebellar ataxia, and spinal cord injury.
 CC The antibody is useful for treatment of a tumour comprising inhibiting
 CC proliferation of a tumour cell preferably a glial tumour cell, for
 CC treating of neurofibromatosis by inhibiting glial cell mitogenesis.
 CC The present sequence represents NRG-2alpha.

XX

SQ Sequence 330 AA;

Query Match 100.0%; Score 1749; DB 23; Length 330;
 Best Local Similarity 100.0%; Pred. No. 3.2e-109;
 Matches 330; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy	1	MRRDPAPGFSMLLFGVSLACYSPLKSVQDQAYKAPVVVEGKVQGLVPAGGSSSNSTREP	60
Db	1	MRRDPAPGFSMLLFGVSLACYSPLKSVQDQAYKAPVVVEGKVQGLVPAGGSSSNSTREP	60
Qy	61	PASGRVALVKVLDKWPLRSGGLQREQVISVGSCVPLERNQRYIFFLEPTEQPLVFKTAF	120
Db	61	PASGRVALVKVLDKWPLRSGGLQREQVISVGSCVPLERNQRYIFFLEPTEQPLVFKTAF	120
Qy	121	PLDTNGKNLKKKEVGKILCTDCATRPKLKMKMSQTGQVGEKQSLKCEAAAGNPQPSYRWF	180
Db	121	PLDTNGKNLKKKEVGKILCTDCATRPKLKMKMSQTGQVGEKQSLKCEAAAGNPQPSYRWF	180
Qy	181	DGKELNRSRDIRIKYGNRKNLQFNKVKVEDAGEYVCEAENILGKDTVGRGLYVNSVS	240
Db	181	DGKELNRSRDIRIKYGNRKNLQFNKVKVEDAGEYVCEAENILGKDTVGRGLYVNSVS	240
Qy	241	TTLSSWSGHARKCNETAKSYCVNGGVCYYIEGINQLSCKCPNGFFGQRCLEKLPLRLYMP	300
Db	241	TTLSSWSGHARKCNETAKSYCVNGGVCYYIEGINQLSCKCPNGFFGQRCLEKLPLRLYMP	300
Qy	301	DPKQSVLWDTPGTGVSSSQWSTSPSTLDLN	330
Db	301	DPKQSVLWDTPGTGVSSSQWSTSPSTLDLN	330

RESULT 2

ABB07894

ID ABB07894 standard; protein; 422 AA.

XX

AC ABB07894;

XX

DT 03-JUL-2002 (first entry)

XX

DE Human neuregulin 2 isoform 6.

XX

KW Human; MUC1; mucin; glycoprotein; cytostatic; cancer; tumour; ECD;

KW extracellular domain; neuregulin 2; isoform.
 XX
 OS Homo sapiens.
 XX
 PN WO200222685-A2.
 XX
 PD 21-MAR-2002.
 XX
 PF 11-SEP-2001; 2001WO-US28548.
 XX
 PR 11-SEP-2000; 2000US-231841P.
 XX
 PA (KUFE/) KUFE D W.
 PA (OHNO/) OHNO T.
 XX
 PI Kufe DW, Ohno T;
 XX
 DR WPI; 2002-339864/37.
 XX
 PT Use of a mucin glycoprotein (MUC1) extracellular domain antagonist for
 PT manufacturing a medicant that inhibits the proliferation of MUC-1
 PT expressing cancer cells and that can treat cancers and reduce tumor
 PT growth -
 XX
 PS Claim 6; Page 56-58; 74pp; English.
 XX
 CC The invention relates to the use of a MUC1 (mucin glycoprotein)
 CC extracellular domain (ECD) antagonist for the manufacture of a medicant
 CC to inhibit the proliferation of MUC-1 expressing cancer cells. MUC1 ECD
 CC antagonists (optionally combined with a pharmaceutical carrier) can be
 CC administered to inhibit proliferation of MUC1-expressing cancer cells,
 CC useful to treat cancers e.g. skin cancer, prostate cancer and leukemia,
 CC especially in humans. The method may also be combined with administration
 CC of a chemotherapeutic agent (e.g. an alkylating agent, topoisomerase etc)
 CC or radiation to treat cancer, especially to reduce tumour growth. The
 CC polypeptides are also useful in screening to identify MUC1 ECD
 CC antagonists. The present sequence represents a human neuregulin 2
 CC isoform 6, a fragment of which can bind to MUC1/ECD.
 XX
 SQ Sequence 422 AA;

Query Match 100.0%; Score 1749; DB 23; Length 422;
 Best Local Similarity 100.0%; Pred. No. 4.2e-109;
 Matches 330; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 MRRDPAPGFSMLLFGVSLACYSPLKSVQDQAYKAPVVVEGKVQGLVPAGGSSSNSTREP 60
 ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
 Db 93 MRRDPAPGFSMLLFGVSLACYSPLKSVQDQAYKAPVVVEGKVQGLVPAGGSSSNSTREP 152
 Qy 61 PASGRVALVKVLDKWPLRSGGLQREQVISVGSCVPLERNQRYIFFLEPTEQPLVFKTAFA 120
 ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
 Db 153 PASGRVALVKVLDKWPLRSGGLQREQVISVGSCVPLERNQRYIFFLEPTEQPLVFKTAFA 212
 Qy 121 PLDTNGKNLKKKEVGKILCTDCATRPKLKKMKSQTGQVGEKQSLKCEAAAGNPQPSYRWFK 180
 ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
 Db 213 PLDTNGKNLKKKEVGKILCTDCATRPKLKKMKSQTGQVGEKQSLKCEAAAGNPQPSYRWFK 272

QY	181	DGKELNRSRDIRIKYGNRKNRLQFNKVKVEDAGEYVCEAENILGKDTVGRGLYVNSVS	240
Db	273	DGKELNRSRDIRIKYGNRKNRLQFNKVKVEDAGEYVCEAENILGKDTVGRGLYVNSVS	332
QY	241	TTLSSWSGHARKCNETAKSYCVNGGVCYYIEGINQLSCKCPNGFFGQRCLEKLPLRLYMP	300
Db	333	TTLSSWSGHARKCNETAKSYCVNGGVCYYIEGINQLSCKCPNGFFGQRCLEKLPLRLYMP	392
QY	301	DPKQSVLWDTPGTGVSSSQWSTSPSTLDLN	330
Db	393	DPKQSVLWDTPGTGVSSSQWSTSPSTLDLN	422

RESULT 3

AAW27537

ID AAW27537 standard; Protein; 330 AA.

XX

AC AAW27537;

XX

DT 18-DEC-1997 (first entry)

XX

DE Rat cerebellum derived growth factor 2.

XX

KW Rat; cerebellum derived growth factor; CDGF2; screening; binding;
 KW modulation; erbB type receptor; identification; indication; risk;
 KW proliferation; differentiation; induction; neuron; hyperplasia;
 KW stem cell culture; intracerebral graft; alleviation; repair;
 KW behavioural defect; nervous system; central; peripheral; nerve;
 KW prosthesis; damage; entubulation; cell survival; treatment;
 KW injury; trauma; ischaemia; ischemia; stroke; infection; disorder;
 KW inflammation; neurodegeneration; disease; Parkinson's;
 KW Huntingdon's; amyotrophic lateral sclerosis; sensory; retina;
 KW spinocerebellar degeneration; multiple sclerosis; neoplasia;
 KW amalignant glioma; medulloblastoma; neuroectodermal tumour.

XX

OS Rattus rattus.

XX

FH Key Location/Qualifiers

FT Peptide 1..23

FT /label= sig_peptide

FT Peptide 24..330

FT /label= mat_peptide

FT Domain 158..228

FT /label= immunoglobulin_like_domain

FT Domain 252..297

FT /label= epidermal_growth_factor_like_domain

FT Region 253

FT /note= "characteristic cysteine of epidermal growth factor like domain"

FT Region 261

FT /note= "characteristic cysteine of epidermal growth factor like domain"

FT Region 267

FT /note= "characteristic cysteine of epidermal growth factor like domain"

FT Region 278

FT /note= "characteristic cysteine of epidermal growth factor like domain"

FT factor like domain"
 FT Region 280
 FT /note= "characteristic cysteine of epidermal growth
 FT factor like domain"
 FT Region 289
 FT /note= "characteristic cysteine of epidermal growth
 FT factor like domain"
 FT Region 55
 FT /note= "potential N-glycosylation site"
 FT Region 186
 FT /note= "potential N-glycosylation site"
 FT Region 254
 FT /note= "potential N-glycosylation site"
 XX
 PN WO9709425-A1.
 XX
 PD 13-MAR-1997.
 XX
 PF 09-SEP-1996; 96WO-US14484.
 XX
 PR 08-SEP-1995; 95US-0525864.
 XX
 PA (HARD) HARVARD COLLEGE.
 PA (STRD) UNIV LELAND STANFORD JUNIOR.
 PA (STRD) UNIV LELAND S STANFORD.
 XX
 PI Chang H;
 XX
 DR WPI; 1997-192900/17.
 DR N-PSDB; AAT87923.
 XX
 PT Rat and human cerebellum-derived growth factors - used in the
 PT treatment of neuronal injury and proliferative disorders
 XX
 PS Claim 1; Pages 70-71; 94pp; English.
 XX
 CC The present sequence is rat cerebellum derived growth factor 2
 CC (CDGF2), which can be used to screen for modulators of CDGF
 CC binding to erbB type receptors. Identification of a modification or
 CC mutation in a CDGF gene, or aberrant expression of a CDGF gene or
 CC levels of soluble CDGF may be used to indicate the risk of unwanted
 CC cell proliferation or differentiation.
 CC CDGF may be used to induce neuronal differentiation in stem cell
 CC culture, and maintain the integrity of a terminally differentiated
 CC neuronal cell culture, e.g. useful for intracerebral grafting to
 CC alleviate behavioural defects. CDGF may also be used in nerve
 CC prostheses to repair central and peripheral nerve damage, especially
 CC where a crushed or severed axon is entubulated by a prosthetic.
 CC CDGF may also be used to enhance neuronal cell survival in the
 CC central or peripheral nervous system, to treat neurological
 CC conditions associated with nervous system injury, e.g. traumatic,
 CC chemical or vascular injury and deficits such as ischaemia resulting
 CC from stroke, infectious/inflammatory and tumour induced injury,
 CC chronic neurodegenerative disease including Parkinson's and
 CC Huntington's, amyotrophic lateral sclerosis, spinocerebellar
 CC degeneration, chronic immunological disease of the nervous system
 CC including multiple sclerosis, disorders of the sensory neurons and

CC degenerative diseases of the retina. CDGF may also be used to treat
CC neoplastic or hyperplastic transformations, particularly of the
CC central nervous system, e.g. amalignant gliomas, medulloblastomas
CC and neuroectodermal tumours.

XX

SQ Sequence 330 AA;

Query Match 98.5%; Score 1722; DB 18; Length 330;

Best Local Similarity 97.9%; Pred. No. 2e-107;

Matches 323; Conservative 4; Mismatches 3; Indels 0; Gaps 0;

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Qy      1 MRRDPAPGFSMLLFGVSLACYSPLKSVQDQAYKAPVVVEGKVQGLVPAGGSSSNSTREP 60
          |||
Db      1 MRRDPAPGFSMLLFGVSLACYSPLKSVQDQAYKAPVVVEGKVQGLAPAGGSSSNSTREP 60

Qy     61 PASGRVALVKVLDKWPLRSGGLQREQVISVGSCVPLERNQRYIFFLEPTEQPLVFKTAFA 120
          |||
Db     61 PASGRVALVKVLDKWPLRSGGLQREQVISVGSCAPLERNQRYIFFLEPTEQPLVFKTAFA 120

Qy    121 PLDTNGKNLKKEVGKILCTDCATRPKLKKMKSQTGQVGEKQSLKCEAAAGNPQPSYRWFK 180
          |:| |||:|||||
Db    121 PVDPNGKNIKKEVGKILCTDCATRPKLKKMKSQTGEVGEKQSLKCEAAAGNPQPSYRWFK 180

Qy    181 DGKELNRSRDIRIKYGNRKN SRLQFNKVKVEDAGEYVCEAENILGKDTVGRGLVNSVS 240
          |||
Db    181 DGKELNRSRDIRIKYGNRKN SRLQFNKVKVEDAGEYVCEAENILGKDTVGRGLHVNSVS 240

Qy    241 TTLSSWSGHARKCNETAKSYCVNGGVCYYIEGINQLSCKCPNGFFGQRCLEKLPRLLYMP 300
          |||
Db    241 TTLSSWSGHARKCNETAKSYCVNGGVCYYIEGINQLSCKCPNGFFGQRCLEKLPRLLYMP 300

Qy    301 DPKQSVLWDTPGTGVSSSQWSTSPSTLDLN 330
          |||
Db    301 DPKQSVLWDTPGTGVSSSQWSTSPSTLDLN 330
```

RESULT 4

ABB07893

ID ABB07893 standard; protein; 426 AA.

XX

AC ABB07893;

XX

DT 03-JUL-2002 (first entry)

XX

DE Human neuregulin 2 isoform 5.

XX

KW Human; MUC1; mucin; glycoprotein; cytostatic; cancer; tumour; ECD;
KW extracellular domain; neuregulin 2; isoform.

XX

OS Homo sapiens.

XX

PN WO200222685-A2.

XX

PD 21-MAR-2002.

XX

PF 11-SEP-2001; 2001WO-US28548.

XX

PR 11-SEP-2000; 2000US-231841P.

XX

PA (KUFE/) KUFE D W.

PA (OHNO/) OHNO T.

XX

PI Kufe DW, Ohno T;

XX

DR WPI; 2002-339864/37.

XX

PT Use of a mucin glycoprotein (MUC1) extracellular domain antagonist for
PT manufacturing a medicant that inhibits the proliferation of MUC-1
PT expressing cancer cells and that can treat cancers and reduce tumor
PT growth -

XX

PS Claim 6; Page 53-55; 74pp; English.

XX

CC The invention relates to the use of a MUC1 (mucin glycoprotein)
CC extracellular domain (ECD) antagonist for the manufacture of a medicant
CC to inhibit the proliferation of MUC-1 expressing cancer cells. MUC1 ECD
CC antagonists (optionally combined with a pharmaceutical carrier) can be
CC administered to inhibit proliferation of MUC1-expressing cancer cells,
CC useful to treat cancers e.g. skin cancer, prostate cancer and leukemia,
CC especially in humans. The method may also be combined with administration
CC of a chemotherapeutic agent (e.g. an alkylating agent, topoisomerase etc)
CC or radiation to treat cancer, especially to reduce tumour growth. The
CC polypeptides are also useful in screening to identify MUC1 ECD
CC antagonists. The present sequence represents a human neuregulin 2
CC isoform 5, a fragment of which can bind to MUC1/ECD.

XX

SQ Sequence 426 AA;

Query Match 98.3%; Score 1720; DB 23; Length 426;

Best Local Similarity 100.0%; Pred. No. 3.7e-107;

Matches 324; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Qy      1 MRRDPAPGF SMLLF GVS LAC YSP SLK SVQDQAYKAPVVVEGKVQGLVPAGGSSSNSTREP 60
          |||
Db      93 MRRDPAPGF SMLLF GVS LAC YSP SLK SVQDQAYKAPVVVEGKVQGLVPAGGSSSNSTREP 152

Qy      61 PASGRVALVKVLDKWPLRSGGLQREQVISVGSCVPLERNQRYIFFLEPTEQPLVFKTAFA 120
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Db     153 PASGRVALVKVLDKWPLRSGGLQREQVISVGSCVPLERNQRYIFFLEPTEQPLVFKTAFA 212

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Db     213 PLDTNGKNLKKKEVGKILCTDCATRPKLKKMKSQTGQVGEKQSLKCEAAAGNPQPSYRWFK 272

Qy     181 DGKELNRSRDIRIKYGNRKN SRLQFNKVKVEDAGEYVCEAENILGKDTVGRRLVNSVS 240
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Db     273 DGKELNRSRDIRIKYGNRKN SRLQFNKVKVEDAGEYVCEAENILGKDTVGRRLVNSVS 332

Qy     241 TTLSSWSGHARKCNETAKSYCVNGGVCYYIEGINQLSCKCPNGFFGQRCLEKLPLRLYMP 300
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          |||
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Db 393 DPKQSVLWDTPGTGVSSSQWSTSP 416

RESULT 5

AAW63700

ID AAW63700 standard; Protein; 860 AA.

XX

AC AAW63700;

XX

DT 29-SEP-1998 (first entry)

XX

DE Receptor type tyrosine kinase ErbB ligand.

XX

KW Receptor type tyrosine kinase ErbB; ligand; diagnostic agent;
KW nervous disease; cancer.

XX

OS Rattus sp.

XX

PN JP10179166-A.

XX

PD 07-JUL-1998.

XX

PF 25-DEC-1996; 96JP-0356998.

XX

PR 25-DEC-1996; 96JP-0356998.

XX

PA (HIGA/) HIGASHIYAMA S.

XX

DR WPI; 1998-430952/37.

DR N-PSDB; AAV43674.

XX

PT Gene coding the ligand of the tyrosine kinase ErbB receptor - useful
PT for diagnosing and treating nervous diseases and cancer

XX

PS Claim 1; Pages 9-13; 17pp; Japanese.

XX

CC This represents the ligand of receptor type tyrosine kinase ErbB. A
CC prokaryotic or eukaryotic host cell transformed by a recombinant vector
CC containing the encoding DNA can be used for the recombinant production of
CC the protein. The invention provides a method for inhibiting the formation
CC of the ligand of receptor type tyrosine kinase ErbB in an animal using
CC an antibody recognizing the protein. The ligand of the tyrosine kinase
CC ErbB receptor and associated materials can be used for treating or
CC diagnosing nervous diseases and cancers.

XX

SQ Sequence 860 AA;

Query Match 90.1%; Score 1575; DB 19; Length 860;

Best Local Similarity 97.4%; Pred. No. 4e-97;

Matches 296; Conservative 4; Mismatches 4; Indels 0; Gaps 0;

Qy 1 MRRDPAPGFSMLLFGVSLACYSPSLKSVQDQAYKAPVVVEGKVQGLVPAGGSSSNSTREP 60

||||| ||||||| ||||||| ||||||| ||||||| ||||||| ||||||| |||||||

Db 109 MRRDPAPGSSMLLFGVSLACYSPSLKSVQDQAYKAPVVVEGKVQGLAPAGGSSSNSTREP 168

Qy 61 PASGRVALVKVLDKWPLRSGGLQREQVISVGSCVPLERNQRYIFFLEPTEQPLVFKTAFA 120

||||| ||||||| ||||||| ||||||| ||||||| ||||||| ||||||| |||||||

XX
PT Neuregulin-2 polypeptide and polynucleotide useful for treating
PT multiple sclerosis, spinal muscular atrophy, nerve injury, Alzheimer's
PT disease, by increasing mitogenesis, survival, growth or differentiation
PT of a cell -

XX
PS Claim 53; Fig 9; 79pp; English.

XX
CC The invention relates to a substantially pure neuregulin (NRG)-2
CC polypeptide comprising or consisting of a sequence for human
CC NRG-2alpha or NRG-2beta (clone 2b7) and the polynucleotides encoding
CC the. Also included are a vector expressing the protein, a host cell
CC comprising the vector, a transgenic non-human animal transformed with
CC the vector or having a knockout mutation in one or both NRG-2
CC alleles and an anti-NRG-2 antibody. Analysis of mutations in NRG-2 in an
CC individual is useful for diagnosing an increased likelihood of
CC developing a NRG-2-related disease or condition in a test subject.
CC NRG-2 is useful for increasing the mitogenesis, survival, growth or
CC differentiation of a cell (e.g. a neuronal cell), where the cell
CC expresses an erbB receptor. NRG-2 is useful for treating diseases
CC and disorders such as cardiomyopathy (preferably degenerative congenital
CC disease), ischaemic damage, cardiac trauma or heart failure or which
CC has a condition affecting smooth muscle which include atherosclerosis,
CC vascular lesion, vascular hypertension, and degenerative congenital
CC vascular disease, myasthenia gravis, a neurodegenerative disorder,
CC peripheral neuropathy, a sensory nerve fiber neuropathy, a motor fiber
CC and a sensory nerve fiber neuropathy, multiple sclerosis, amyotrophic
CC lateral sclerosis, spinal muscular atrophy, nerve injury, Alzheimer's
CC disease, Parkinson's disease, cerebellar ataxia, and spinal cord injury.
CC The antibody is useful for treatment of a tumour comprising inhibiting
CC proliferation of a tumour cell preferably a glial tumour cell, for
CC treating of neurofibromatosis by inhibiting glial cell mitogenesis.
CC The present sequence represents NRG-2beta.

XX
SQ Sequence 298 AA;

Query Match 86.0%; Score 1505; DB 23; Length 298;
Best Local Similarity 98.6%; Pred. No. 5.8e-93;
Matches 285; Conservative 1; Mismatches 3; Indels 0; Gaps 0;

Qy 1 MRRDPAPGFSMLLFGVSLACYSPLKSVQDQAYKAPVVVEGKVQGLVPAGGSSSNSTREP 60
|
Db 1 MRRDPAPGFSMLLFGVSLACYSPLKSVQDQAYKAPVVVEGKVQGLVPAGGSSSNSTREP 60

Qy 61 PASGRVALVKVLDKWPLRSGGLQREQVISVSGCVPLERNQRYIFFLEPTEQPLVFKTAFA 120
|
Db 61 PASGRVALVKVLDKWPLRSGGLQREQVISVSGCVPLERNQRYIFFLEPTEQPLVFKTAFA 120

Qy 121 PLDTNGKNLKKKEVGKILCTDCATRPKLKKMKSQTGQVGEKQSLKCEAAAGNPQPSYRWEK 180
|
Db 121 PLDTNGKNLKKKEVGKILCTDCATRPKLKKMKSQTGQVGEKQSLKCEAAAGNPQPSYRWEK 180

Qy 181 DGKELNRSRDIRIKYGNRKN SRLQFNKVKVEDAGEYVCEAENILGKDTVGRGLYVNSVS 240
|
Db 181 DGKELNRSRDIRIKYGNRKN SRLQFNKVKVEDAGEYVCEAENILGKDTVGRGLYVNSVS 240

Qy 241 TTLSSWSGHARKCNETAKSYCVNGGVCYYIEGINQLSCKCPNGFFGQRC 289

Db

||||| : |||
241 TTLSSWSGHARKCNETAKSYCVNGGVCYYIEGINQLSCKCPVGYTGDRC 289

RESULT 7

AAW27536

ID AAW27536 standard; Protein; 754 AA.

XX

AC AAW27536;

XX

DT 18-DEC-1997 (first entry)

XX

DE Rat cerebellum derived growth factor 1.

XX

KW Rat; cerebellum derived growth factor; CDGF1; screening; binding;

KW modulation; erbB type receptor; identification; indication; risk;

KW proliferation; differentiation; induction; neuron; hyperplasia;

KW stem cell culture; intracerebral graft; alleviation; repair;

KW behavioural defect; nervous system; central; peripheral; nerve;

KW prosthesis; damage; entubulation; cell survival; treatment;

KW injury; trauma; ischaemia; ischemia; stroke; infection; disorder;

KW inflammation; neurodegeneration; disease; Parkinson's;

KW Huntingdon's; amyotrophic lateral sclerosis; sensory; retina;

KW spinocerebellar degeneration; multiple sclerosis; neoplasia;

KW amalignant glioma; medulloblastoma; neuroectodermal tumour.

XX

OS Rattus rattus.

XX

FH Key Location/Qualifiers

FT Peptide 1..23

FT /label= sig_peptide

FT Peptide 24..754

FT /label= mat_peptide

FT Domain 158..228

FT /label= immunoglobulin_like_domain

FT Domain 252..297

FT /label= epidermal_growth_factor_like_domain

FT Domain 316..338

FT /label= putative_transmembrane_domain

FT Cleavage-site 314..315

FT /label= potential_proteolytic_site

FT Region 253

FT /note= "characteristic cysteine of epidermal growth factor like domain"

FT Region 261

FT /note= "characteristic cysteine of epidermal growth factor like domain"

FT Region 267

FT /note= "characteristic cysteine of epidermal growth factor like domain"

FT Region 278

FT /note= "characteristic cysteine of epidermal growth factor like domain"

FT Region 280

FT /note= "characteristic cysteine of epidermal growth factor like domain"

FT Region 289

FT /note= "characteristic cysteine of epidermal growth
 FT factor like domain"
 FT Region 55
 FT /note= "potential N-glycosylation site"
 FT Region 186
 FT /note= "potential N-glycosylation site"
 FT Region 254
 FT /note= "potential N-glycosylation site"
 FT Region 296
 FT /note= "potential N-glycosylation site"
 XX
 PN WO9709425-A1.
 XX
 PD 13-MAR-1997.
 XX
 PF 09-SEP-1996; 96WO-US14484.
 XX
 PR 08-SEP-1995; 95US-0525864.
 XX
 PA (HARD) HARVARD COLLEGE.
 PA (STRD) UNIV LELAND STANFORD JUNIOR.
 PA (STRD) UNIV LELAND S STANFORD.
 XX
 PI Chang H;
 XX
 DR WPI; 1997-192900/17.
 DR N-PSDB; AAT87922.
 XX
 PT Rat and human cerebellum-derived growth factors - used in the
 PT treatment of neuronal injury and proliferative disorders
 XX
 PS Claim 1; Pages 63-66; 94pp; English.
 XX
 CC The present sequence is rat cerebellum derived growth factor 1
 CC (CDGF1), which can be used to screen for modulators of CDGF
 CC binding to erbB type receptors. Identification of a modification or
 CC mutation in a CDGF gene, or aberrant expression of a CDGF gene or
 CC levels of soluble CDGF may be used to indicate the risk of unwanted
 CC cell proliferation or differentiation.
 CC CDGF may be used to induce neuronal differentiation in stem cell
 CC culture, and maintain the integrity of a terminally differentiated
 CC neuronal cell culture, e.g. useful for intracerebral grafting to
 CC alleviate behavioural defects. CDGF may also be used in nerve
 CC protheses to repair central and peripheral nerve damage, especially
 CC where a crushed or severed axon is entubulated by a prosthetic.
 CC CDGF may also be used to enhance neuronal cell survival in the
 CC central or peripheral nervous system, to treat neurological
 CC conditions associated with nervous system injury, e.g. traumatic,
 CC chemical or vasal injury and deficits such as ischaemia resulting
 CC from stroke, infectious/inflammatory and tumour induced injury,
 CC chronic neurodegenerative disease including Parkinson's and
 CC Huntingdon's, amyotrophic lateral sclerosis, spinocerebellar
 CC degeneration, chronic immunological disease of the nervous system
 CC including multiple sclerosis, disorders of the sensory neurons and
 CC degenerative diseases of the retina. CDGF may also be used to treat
 CC neoplastic or hyperplastic transformations, particularly of the
 CC central nervous system, e.g. amalignant gliomas, medulloblastomas

CC and neuroectodermal tumours.

XX

SQ Sequence 754 AA;

Query Match 84.5%; Score 1478; DB 18; Length 754;

Best Local Similarity 96.2%; Pred. No. 1.1e-90;

Matches 278; Conservative 5; Mismatches 6; Indels 0; Gaps 0;

```
Qy      1 MRRDPAPGFSMLLFGVSLACYSPSLKSVQDQAYKAPVVVEGKVQGLVPAGGSSSNSTREP 60
          |||
Db      1 MRRDPAPGFSMLLFGVSLACYSPSLKSVQDQAYKAPVVVEGKVQGLAPAGGSSSNSTREP 60

Qy     61 PASGRVALVKVLDKWPLRSGGLQREQVISVGSCVPLERNQRYIFFLEPTEQPLVFKTAFA 120
          |||
Db     61 PASGRVALVKVLDKWPLRSGGLQREQVISVGSCAPLERNQRYIFFLEPTEQPLVFKTAFA 120

Qy    121 PLDTNGKNLKKKEVGKILCTDCATRPKLKKMKSQGTGQVGEKQSLKCEAAAGNPQPSYRWFK 180
          |::|
Db    121 PVDPNGKNIKKEVGKILCTDCATRPKLKKMKSQGTGEVGEKQSLKCEAAAGNPQPSYRWFK 180

Qy    181 DGKELNRSRDIRIKYGNRKNRSLQFNKVKVEDAGEYVCEAENILGKDTVGRGLYVNSVS 240
          |||
Db    181 DGKELNRSRDIRIKYGNRKNRSLQFNKVKVEDAGEYVCEAENILGKDTVGRGLHVNSVS 240

Qy    241 TTLSSWSGHARKCNETAKSYCVNGGVCYYIEGINQLSCKCPNGFFGQRC 289
          |||
Db    241 TTLSSWSGHARKCNETAKSYCVNGGVCYYIEGINQLSCKCPVGYTGDRC 289
```

RESULT 8

AAW48380

ID AAW48380 standard; Protein; 181 AA.

XX

AC AAW48380;

XX

DT 17-AUG-1998 (first entry)

XX

DE Mus musculus don-1 polypeptide.

XX

KW Murine; don-1 gene; melanoma; treatment; adenocarcinoma;

KW epithelial cell; proliferation; stimulation; treatment; tumours;

KW skin; oesophagus; lung; breast; liver; pancreas; colon; prostate;

KW gastrointestinal tract; uterus; wound healing; transmembrane.

XX

OS Mus musculus.

XX

FH Key Location/Qualifiers

FT Domain 104..140

FT /note= "EGF domain"

XX

PN WO9807736-A1.

XX

PD 26-FEB-1998.

XX

PF 18-AUG-1997; 97WO-US14585.

XX

PR 19-NOV-1996; 96US-0753007.

PR 19-AUG-1996; 96US-0699591.

XX

PA (MILL-) MILLENNIUM BIOTHERAPEUTICS INC.

XX

PI Busfield SJ, Gearing DP;

XX

DR WPI; 1998-169084/15.

DR N-PSDB; AAV17813.

XX

PT Mouse and human don-1 polypeptide(s) - useful for treatment of
PT melanomas and adenocarcinoma(s), and for wound healing

XX

PS Claim 25; Fig 2; 121pp; English.

XX

CC The sequence is that encoded by a murine don-1 gene splice variant.

CC Don-1 polypeptides stimulate proliferation of epithelial cells

CC and thus are implicated in melanomas and adenocarcinomas in which

CC epithelial cells proliferate out of control. Compounds that

CC interfere with don-1 mediated cell proliferation can be used

CC in the treatment of tumours such as melanomas and adenocarcinomas

CC of the skin, oesophagus, lung, breast, liver, pancreas,

CC gastrointestinal tract, colon, prostate or uterus. Alternatively,

CC don-1 polypeptides can be used to stimulate epithelial cell

CC proliferation, e.g. for wound healing.

XX

SQ Sequence 181 AA;

Query Match 54.9%; Score 960; DB 19; Length 181;

Best Local Similarity 97.8%; Pred. No. 9.3e-57;

Matches 177; Conservative 3; Mismatches 1; Indels 0; Gaps 0;

Qy 150 MKSQGTGQVG EKQSLKCEAAAGNP QPSYRWFKD GKELNRSRDIRIKYGN GRKNSRLQFNKV 209
 | : | | | | | | | | | | | |

Db 1 MKSQTGEVGEKQSLKCEAAAGNPQPSYRWFKDGKELNRSRDIRIKYGNVRKNSRLQFNKV 60

Qy 210 KVEDAGEYVCEAENILGKDTVVRGLYVNSVSTTLSSWSGHARKCNETAKSYCVNGGVCYY 269
 :|:|||||:|:|:|:|:|:|:|:|:|:|:|:|:|:|:|:|:|:|:|:|:|:|:|:|:|:|:|:|

Db 61 RVEDAGEYVCEAENILGKDTVGRHLHVNSVSTTLSSWSGHARKCNETAKSYCVNGGVCYY 120

Qy 270 IEGINQLSCKCPNGFFGQRCLEKLPLRLYMPDPKQSVLWDTPTGTGVSSSQWSTSPSTLDL 329

Db 121 IEGINQLSCKCPNGFFGQRCLEKLPLRLYMPDPKQSVLWDTPGTGVSSSQWSTSPSTLDL 180

Qy 330 N 330

Db 181 N 181

RESULT 9

ABG71637

ID ABG71637 standard; Protein; 181 AA.

XX

AC ABG71637;

XX

DT 14-JAN-2003 (first entry)

XX

DE Murine secreted splice variant of Don-1.

XX
 KW Murine; Don-1; epidermal growth factor; EGF; neuregulin; mouse;
 KW glycoprotein ligand; cell proliferation; cell proliferative disorder;
 KW carcinoma; adenocarcinoma cell; myeloma; cell differentiation;
 KW cell survival; epithelial cell; wound healing; tumour formation;
 KW brain; vulnerary; cytostatic.
 XX
 OS Mus sp.
 XX
 PN US2002127594-A1.
 XX
 PD 12-SEP-2002.
 XX
 PF 12-MAR-2002; 2002US-0096241.
 XX
 PR 22-JUN-2000; 2000US-0599789.
 XX
 PA (GEAR/) GEARING D P.
 PA (BUSF/) BUSFIELD S J.
 XX
 PI Gearing DP, Busfield SJ;
 XX
 DR WPI; 2003-039584/03.
 DR N-PSDB; ABS56034.
 XX
 PT Novel Don-1 polypeptide useful for stimulating proliferation of cells,
 PT for identifying proteins that interact with Don-1, and for regulating
 PT tumour formation and progression in brain -
 XX
 PS Claim 25; Fig 2; 66pp; English.
 XX
 CC The present invention relates to the isolation of a novel gene
 CC called Don-1, and alternate splice variants of Don-1, which are
 CC related to epidermal growth factors (EGF) such as neuregulins.
 CC Don-1 polypeptides are glycoprotein ligands. Both murine and human
 CC Don-1 sequences are cloned. The mouse Don-1 gene maps to chromosome 18.
 CC Don-1 polypeptides are useful for stimulating proliferation of a cell.
 CC Antibodies to Don-1 polypeptides are useful for detecting Don-1
 CC in a sample. The Don-1 polypeptides are useful for treating and
 CC diagnosing cell proliferative disorders and play a role in the
 CC proliferation of carcinomas e.g. adenocarcinoma, myeloma, in cell
 CC differentiation, proliferation and survival. The polypeptides are
 CC also useful for inhibiting proliferation of adenocarcinoma cells,
 CC for stimulating the proliferation of cells such as epithelial cells
 CC to promote wound healing, for identifying proteins that interact
 CC with Don-1, and for regulating tumour formation and progression in
 CC the brain. The polynucleotide sequences encoding Don-1 may be used
 CC in gene therapy. The present sequence represents murine secreted
 CC splice variant of Don-1.
 XX
 SQ Sequence 181 AA;

 Query Match 54.9%; Score 960; DB 24; Length 181;
 Best Local Similarity 97.8%; Pred. No. 9.3e-57;
 Matches 177; Conservative 3; Mismatches 1; Indels 0; Gaps 0;

Qy 150 MKSQTGQVGEKQSLKCEAAAGNPQPSYRWFKDGKELNRSRDIRIKYGNRKN SRLQFNKV 209

```

      |||||:|||||
Db      1 MKSQTGEVGEKQSLKCEAAAGNPQPSYRWFKDGKELNRSRDIRIKYGNVRKNSRLQFNKV 60
Qy      210 KVEDAGEYVCEAENILGKDTVGRRLVNSVSTTLSSWSGHARKCNETAKSYCVNGGVCYY 269
      :|||||:|||||
Db      61 RVEDAGEYVCEAENILGKDTVGRRLHVNSVSTTLSSWSGHARKCNETAKSYCVNGGVCYY 120
Qy      270 IEGINQLSCKCPNGFFGQRCLEKLPLRLYMPDPKQSVLWDTPGTGVSSSQWSTSPSTLDL 329
      |||||:|||||
Db      121 IEGINQLSCKCPNGFFGQRCLEKLPLRLYMPDPKQSVLWDTPGTGVSSSQWSTSPSTLDL 180
Qy      330 N 330
      |
Db      181 N 181

```

RESULT 10

ABG71639

ID ABG71639 standard; Protein; 469 AA.

XX

AC ABG71639;

XX

DT 14-JAN-2003 (first entry)

XX

DE Human second splice variant of Don-1.

XX

KW Human; Don-1; epidermal growth factor; EGF; neuregulin;

KW glycoprotein ligand; cell proliferation; cell proliferative disorder;

KW carcinoma; adenocarcinoma cell; myeloma; cell differentiation;

KW cell survival; epithelial cell; wound healing; tumour formation;

KW brain; vulnerary; cytostatic.

XX

OS Homo sapiens.

XX

FH Key Location/Qualifiers

FT Misc-difference 14

FT /note= "Encoded by AA"

XX

PN US2002127594-A1.

XX

PD 12-SEP-2002.

XX

PF 12-MAR-2002; 2002US-0096241.

XX

PR 22-JUN-2000; 2000US-0599789.

XX

PA (GEAR/) GEARING D P.

PA (BUSF/) BUSFIELD S J.

XX

PI Gearing DP, Busfield SJ;

XX

DR WPI; 2003-039584/03.

DR N-PSDB; ABS56036.

XX

PT Novel Don-1 polypeptide useful for stimulating proliferation of cells,

PT for identifying proteins that interact with Don-1, and for regulating

PT tumour formation and progression in brain -

XX
 PS Claim 25; Fig 4; 66pp; English.
 XX
 CC The present invention relates to the isolation of a novel gene
 CC called Don-1, and alternate splice variants of Don-1, which are
 CC related to epidermal growth factors (EGF) such as neuregulins.
 CC Don-1 polypeptides are glycoprotein ligands. Both murine and human
 CC Don-1 sequences are cloned. The mouse Don-1 gene maps to chromosome 18.
 CC Don-1 polypeptides are useful for stimulating proliferation of a cell.
 CC Antibodies to Don-1 polypeptides are useful for detecting Don-1
 CC in a sample. The Don-1 polypeptides are useful for treating and
 CC diagnosing cell proliferative disorders and play a role in the
 CC proliferation of carcinomas e.g. adenocarcinoma, myeloma, in cell
 CC differentiation, proliferation and survival. The polypeptides are
 CC also useful for inhibiting proliferation of adenocarcinoma cells,
 CC for stimulating the proliferation of cells such as epithelial cells
 CC to promote wound healing, for identifying proteins that interact
 CC with Don-1, and for regulating tumour formation and progression in
 CC the brain. The polynucleotide sequences encoding Don-1 may be used
 CC in gene therapy. The present sequence represents human second
 CC splice variant of Don-1.
 XX
 SQ Sequence 469 AA;

Query Match 50.4%; Score 881; DB 24; Length 469;
 Best Local Similarity 100.0%; Pred. No. 5.2e-51;
 Matches 163; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy	142	ATRPKLKKMKSQTGQVGEKQSLKCEAAAGNPQPSYRWFKDGKELNRSRDIRIKYGNRKN	201
Db	31	ATRPKLKKMKSQTGQVGEKQSLKCEAAAGNPQPSYRWFKDGKELNRSRDIRIKYGNRKN	90
Qy	202	SRLQFNKVKVEDAGEYVCEAENILGKDTVGRGLVNSVSTTLSSWSGHARKCNETAKSYC	261
Db	91	SRLQFNKVKVEDAGEYVCEAENILGKDTVGRGLVNSVSTTLSSWSGHARKCNETAKSYC	150
Qy	262	VNGGVCYYIEGINQLSCKCPNGFFGQRCLEKLPLRLYMPDPKQ	304
Db	151	VNGGVCYYIEGINQLSCKCPNGFFGQRCLEKLPLRLYMPDPKQ	193

RESULT 11

AAW48383

ID AAW48383 standard; Protein; 647 AA.

XX

AC AAW48383;

XX

DT 17-AUG-1998 (first entry)

XX

DE Homo sapiens don-1 polypeptide.

XX

KW Murine; don-1 gene; melanoma; treatment; adenocarcinoma;

KW epithelial cell; proliferation; stimulation; treatment; tumours;

KW skin; oesophagus; lung; breast; liver; pancreas; colon; prostate;

KW gastrointestinal tract; uterus; wound healing; transmembrane.

XX

OS Homo sapiens.

```

XX
FH   Key                Location/Qualifiers
FT   Domain             54..108
FT                               /note= "Ig domain"
FT   Domain             142..178
FT                               /note= "EGF domain"
FT   Domain             203..225
FT                               /note= "transmembrane domain"
FT   Domain             226..647
FT                               /note= "cytoplasmic domain"
XX
PN   WO9807736-A1.
XX
PD   26-FEB-1998.
XX
PF   18-AUG-1997;      97WO-US14585.
XX
PR   19-NOV-1996;      96US-0753007.
PR   19-AUG-1996;      96US-0699591.
XX
PA   (MILL-) MILLENNIUM BIOTHERAPEUTICS INC.
XX
PI   Busfield SJ,   Gearing DP;
XX
DR   WPI; 1998-169084/15.
DR   N-PSDB; AAV17816.
XX
PT   Mouse and human don-1 polypeptide(s) - useful for treatment of
PT   melanomas and adenocarcinoma(s), and for wound healing
XX
PS   Claim 25; Fig 7; 121pp; English.
XX
CC   The sequence is that encoded by a human don-1 gene splice variant.
CC   Don-1 polypeptides stimulate proliferation of epithelial cells
CC   and thus are implicated in melanomas and adenocarcinomas in which
CC   epithelial cells proliferate out of control. Compounds that
CC   interfere with don-1 mediated cell proliferation can be used
CC   in the treatment of tumours such as melanomas and adenocarcinomas
CC   of the skin, oesophagus, lung, breast, liver, pancreas,
CC   gastrointestinal tract, colon, prostate or uterus. Alternatively,
CC   don-1 polypeptides can be used to stimulate epithelial cell
CC   proliferation, e.g. for wound healing.
XX
SQ   Sequence      647 AA;

Query Match          50.4%;  Score 881;  DB 19;  Length 647;
Best Local Similarity 100.0%;  Pred. No. 7.5e-51;
Matches 163;  Conservative 0;  Mismatches 0;  Indels 0;  Gaps 0;

Qy      142  ATRPKLKKMKSQTGQVGEKQSLKCEAAAGNPQPSYRWFKDGKELNRSRDIRIKYGNRKN 201
      |||
Db      31  ATRPKLKKMKSQTGQVGEKQSLKCEAAAGNPQPSYRWFKDGKELNRSRDIRIKYGNRKN 90

Qy      202  SRLQFNKVKVEDAGEYVCEAENILGKDTVGRGLYVNSVSTTLSSWSGHARKCNETAKSYC 261
      |||
Db      91  SRLQFNKVKVEDAGEYVCEAENILGKDTVGRGLYVNSVSTTLSSWSGHARKCNETAKSYC 150

```

Qy 262 VNGGVCYYIEGINQLSCKCPNGFFGQRCLEKLPLRLYMPDPKQ 304
 |||||
 Db 151 VNGGVCYYIEGINQLSCKCPNGFFGQRCLEKLPLRLYMPDPKQ 193

RESULT 12

ABG71644

ID ABG71644 standard; Protein; 647 AA.

XX

AC ABG71644;

XX

DT 14-JAN-2003 (first entry)

XX

DE Human third splice variant of Don-1.

XX

KW Human; Don-1; epidermal growth factor; EGF; neuregulin;

KW glycoprotein ligand; cell proliferation; cell proliferative disorder;

KW carcinoma; adenocarcinoma cell; myeloma; cell differentiation;

KW cell survival; epithelial cell; wound healing; tumour formation;

KW brain; vulnerary; cytostatic.

XX

OS Homo sapiens.

XX

FH Key Location/Qualifiers

FT Misc-difference 14

FT /note= "Encoded by AA"

FT Misc-difference 310

FT /note= "Encoded by AGC"

XX

PN US2002127594-A1.

XX

PD 12-SEP-2002.

XX

PF 12-MAR-2002; 2002US-0096241.

XX

PR 22-JUN-2000; 2000US-0599789.

XX

PA (GEAR/) GEARING D P.

PA (BUSF/) BUSFIELD S J.

XX

PI Gearing DP, Busfield SJ;

XX

DR WPI; 2003-039584/03.

DR N-PSDB; ABS56045.

XX

PT Novel Don-1 polypeptide useful for stimulating proliferation of cells,

PT for identifying proteins that interact with Don-1, and for regulating

PT tumour formation and progression in brain -

XX

PS Claim 25; Fig 7; 66pp; English.

XX

CC The present invention relates to the isolation of a novel gene

CC called Don-1, and alternate splice variants of Don-1, which are

CC related to epidermal growth factors (EGF) such as neuregulins.

CC Don-1 polypeptides are glycoprotein ligands. Both murine and human

CC Don-1 sequences are cloned. The mouse Don-1 gene maps to chromosome 18.

CC Don-1 polypeptides are useful for stimulating proliferation of a cell.

CC Antibodies to Don-1 polypeptides are useful for detecting Don-1
 CC in a sample. The Don-1 polypeptides are useful for treating and
 CC diagnosing cell proliferative disorders and play a role in the
 CC proliferation of carcinomas e.g. adenocarcinoma, myeloma, in cell
 CC differentiation, proliferation and survival. The polypeptides are
 CC also useful for inhibiting proliferation of adenocarcinoma cells,
 CC for stimulating the proliferation of cells such as epithelial cells
 CC to promote wound healing, for identifying proteins that interact
 CC with Don-1, and for regulating tumour formation and progression in
 CC the brain. The polynucleotide sequences encoding Don-1 may be used
 CC in gene therapy. The present sequence represents human third
 CC splice variant of Don-1.

XX

SQ Sequence 647 AA;

Query Match 50.4%; Score 881; DB 24; Length 647;
 Best Local Similarity 100.0%; Pred. No. 7.5e-51;
 Matches 163; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY	142	ATRPKLKKMKSQTGQVGEKQSLKCEAAAGNPQPSYRWFKDGGKELNRSRDIRIKYGNRKN	201
Db	31	ATRPKLKKMKSQTGQVGEKQSLKCEAAAGNPQPSYRWFKDGGKELNRSRDIRIKYGNRKN	90
QY	202	SRLQFNKVKVEDAGEYVCEAENILGKDTVGRLYVNSVSTTLSSWSGHARKCNETAKSYC	261
Db	91	SRLQFNKVKVEDAGEYVCEAENILGKDTVGRLYVNSVSTTLSSWSGHARKCNETAKSYC	150
QY	262	VNGGVCYYIEGINQLSCKCPNGFFGQRCLEKLPLRLYMPDPKQ	304
Db	151	VNGGVCYYIEGINQLSCKCPNGFFGQRCLEKLPLRLYMPDPKQ	193

RESULT 13

AAW48382

ID AAW48382 standard; Protein; 469 AA.

XX

AC AAW48382;

XX

DT 17-AUG-1998 (first entry)

XX

DE Homo sapiens don-1 polypeptide.

XX

KW Murine; don-1 gene; melanoma; treatment; adenocarcinoma;

KW epithelial cell; proliferation; stimulation; treatment; tumours;

KW skin; oesophagus; lung; breast; liver; pancreas; colon; prostate;

KW gastrointestinal tract; uterus; wound healing; transmembrane.

XX

OS Homo sapiens.

XX

FH	Key	Location/Qualifiers
----	-----	---------------------

FT	Domain	54..108
----	--------	---------

FT		/note= "Ig domain"
----	--	--------------------

FT	Domain	142..178
----	--------	----------

FT		/note= "EGF domain"
----	--	---------------------

FT	Domain	203..225
----	--------	----------

FT		/note= "transmembrane domain"
----	--	-------------------------------

FT	Domain	226..469
----	--------	----------

```

FT          /note= "cytoplasmic domain"
XX
PN  WO9807736-A1.
XX
PD  26-FEB-1998.
XX
PF  18-AUG-1997;   97WO-US14585.
XX
PR  19-NOV-1996;   96US-0753007.
PR  19-AUG-1996;   96US-0699591.
XX
PA  (MILL-) MILLENNIUM BIOTHERAPEUTICS INC.
XX
PI  Busfield SJ,   Gearing DP;
XX
DR  WPI; 1998-169084/15.
DR  N-PSDB; AAV17815.
XX
PT  Mouse and human don-1 polypeptide(s) - useful for treatment of
PT  melanomas and adenocarcinoma(s), and for wound healing
XX
PS  Claim 25; Fig 4; 121pp; English.
XX
CC  The sequence is that encoded by a human don-1 gene splice variant.
CC  Don-1 polypeptides stimulate proliferation of epithelial cells
CC  and thus are implicated in melanomas and adenocarcinomas, in which
CC  epithelial cells proliferate out of control. Compounds that
CC  interfere with don-1 mediated cell proliferation can be used
CC  in the treatment of tumours such as melanomas and adenocarcinomas
CC  of the skin, oesophagus, lung, breast, liver, pancreas,
CC  gastrointestinal tract, colon, prostate or uterus. Alternatively,
CC  don-1 polypeptides can be used to stimulate epithelial cell
CC  proliferation, e.g. for wound healing.
XX
SQ  Sequence    469 AA;

Query Match          50.0%;   Score 875;   DB 19;   Length 469;
Best Local Similarity 99.4%;   Pred. No. 1.3e-50;
Matches 162; Conservative    0; Mismatches    1; Indels    0; Gaps    0;

Qy      142 ATRPKLKKMKSQTGQVGEKQSLKCEAAAGNPQPSYRWFKDGKELNRSRDIRIKYGNRKN 201
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Db      31 ATRPKLKKMKSQTGQVGEKQSLKCEAAAGNPQPSYRWFKDGKELNRSRDIRIKYGNRKN 90

Qy      202 SRLQFNKVKVEDAGEYVCEAENILGKDTVGRGLYVNSVSTTLSSWSGHARKCNETAKSYC 261
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Db      91 SRLQFNKVKVEDAGEYVCEAENILGKDTVGRGLYVNSVSTTLSSWSGHARKCNETAKSYC 150

Qy      262 VNGGVCYYIEGINQLSCKCPNGFFGQRCLEKLPLRLYMPDPKQ 304
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Db      151 VNGGVCYYIEGINQLSCKCPNGFFAQRCLLEKLPLRLYMPDPKQ 193

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RESULT 14
AAW48381
ID  AAW48381 standard; Protein; 407 AA.
XX

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AC AAW48381;
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 DT 17-AUG-1998 (first entry)
 XX
 DE Homo sapiens don-1 polypeptide.
 XX
 KW Murine; don-1 gene; melanoma; treatment; adenocarcinoma;
 KW epithelial cell; proliferation; stimulation; treatment; tumours;
 KW skin; oesophagus; lung; breast; liver; pancreas; colon; prostate;
 KW gastrointestinal tract; uterus; wound healing; transmembrane.
 XX
 OS Homo sapiens.
 XX
 FH Key Location/Qualifiers
 FT Domain 16..70
 FT /note= "Ig domain"
 FT Domain 104..140
 FT /note= "EGF domain"
 FT Domain 173..195
 FT /note= "transmembrane domain"
 FT Domain 196..407
 FT /note= "cytoplasmic domain"
 FT Region 157..164
 FT /note= "juxtamembrane region"
 XX
 PN WO9807736-A1.
 XX
 PD 26-FEB-1998.
 XX
 PF 18-AUG-1997; 97WO-US14585.
 XX
 PR 19-NOV-1996; 96US-0753007.
 PR 19-AUG-1996; 96US-0699591.
 XX
 PA (MILL-) MILLENNIUM BIOTHERAPEUTICS INC.
 XX
 PI Busfield SJ, Gearing DP;
 XX
 DR WPI; 1998-169084/15.
 DR N-PSDB; AAV17814.
 XX
 PT Mouse and human don-1 polypeptide(s) - useful for treatment of
 PT melanomas and adenocarcinoma(s), and for wound healing
 XX
 PS Claim 25; Fig 3; 121pp; English.
 XX
 CC The sequence is that encoded by a human don-1 gene splice variant.
 CC Don-1 polypeptides stimulate proliferation of epithelial cells
 CC and thus are implicated in melanomas and adenocarcinomas in which
 CC epithelial cells proliferate out of control. Compounds that
 CC interfere with don-1 mediated cell proliferation can be used
 CC in the treatment of tumours such as melanomas and adenocarcinomas
 CC of the skin, oesophagus, lung, breast, liver, pancreas,
 CC gastrointestinal tract, colon, prostate or uterus. Alternatively,
 CC don-1 polypeptides can be used to stimulate epithelial cell
 CC proliferation, e.g. for wound healing.
 XX

SQ Sequence 407 AA;

Query Match 48.1%; Score 842; DB 19; Length 407;
Best Local Similarity 98.7%; Pred. No. 1.8e-48;
Matches 156; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

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Qy      150 MKSQTGQVGEKQSLKCEAAAGNPQPSYRWFKDGKELNRSRDIRIKYGNRKN SRLQFNKV 209
          |||
Db      1   MKSQTGQVGEKQSLKCEAAAGNPQPSYRWFKDGKELNRSRDIRIKYGNRKN SRLQFNKV 60

Qy      210 KVEDAGEYVCEAENILGKDTVGRGLYVNSVSTTLSSWSGHARKCNETAKSYCVNGGVCYY 269
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Db      61 KVEDAGEYVCEAENILGKDTVGRGLYVNSVSTTLSSWSGHARKCNETAKSYCVNGGVCYY 120

Qy      270 IEGINQLSCKCPNGFFGQRCLEKLPLRLYMPDPKQSVL 307
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Db      121 IEGINQLSCKCPNGFFGQRCLEKLPLRLYMPDPKQKHL 158
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RESULT 15

ABG71638

ID ABG71638 standard; Protein; 407 AA.

XX

AC ABG71638;

XX

DT 14-JAN-2003 (first entry)

XX

DE Human membrane-bound splice variant of Don-1.

XX

KW Human; Don-1; epidermal growth factor; EGF; neuregulin;

KW glycoprotein ligand; cell proliferation; cell proliferative disorder;

KW carcinoma; adenocarcinoma cell; myeloma; cell differentiation;

KW cell survival; epithelial cell; wound healing; tumour formation;

KW brain; vulnerary; cytostatic.

XX

OS Homo sapiens.

XX

PN US2002127594-A1.

XX

PD 12-SEP-2002.

XX

PF 12-MAR-2002; 2002US-0096241.

XX

PR 22-JUN-2000; 2000US-0599789.

XX

PA (GEAR/) GEARING D P.

PA (BUSF/) BUSFIELD S J.

XX

PI Gearing DP, Busfield SJ;

XX

DR WPI; 2003-039584/03.

DR N-PSDB; ABS56035.

XX

PT Novel Don-1 polypeptide useful for stimulating proliferation of cells,
PT for identifying proteins that interact with Don-1, and for regulating
PT tumour formation and progression in brain -

XX

PS Claim 25; Fig 3; 66pp; English.

XX

CC The present invention relates to the isolation of a novel gene
CC called Don-1, and alternate splice variants of Don-1, which are
CC related to epidermal growth factors (EGF) such as neuregulins.
CC Don-1 polypeptides are glycoprotein ligands. Both murine and human
CC Don-1 sequences are cloned. The mouse Don-1 gene maps to chromosome 18.
CC Don-1 polypeptides are useful for stimulating proliferation of a cell.
CC Antibodies to Don-1 polypeptides are useful for detecting Don-1
CC in a sample. The Don-1 polypeptides are useful for treating and
CC diagnosing cell proliferative disorders and play a role in the
CC proliferation of carcinomas e.g. adenocarcinoma, myeloma, in cell
CC differentiation, proliferation and survival. The polypeptides are
CC also useful for inhibiting proliferation of adenocarcinoma cells,
CC for stimulating the proliferation of cells such as epithelial cells
CC to promote wound healing, for identifying proteins that interact
CC with Don-1, and for regulating tumour formation and progression in
CC the brain. The polynucleotide sequences encoding Don-1 may be used
CC in gene therapy. The present sequence represents human membrane-bound
CC splice variant of Don-1.

XX

SQ Sequence 407 AA;

Query Match 48.1%; Score 842; DB 24; Length 407;

Best Local Similarity 98.7%; Pred. No. 1.8e-48;

Matches 156; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

Qy 150 MKSQTGQVGEKQSLKCEAAAGNPQPSYRWFKDGKELNRSRDIRIKYGNRKN SRLQFNKV 209

|||||

Db 1 MKSQTGQVGEKQSLKCEAAAGNPQPSYRWFKDGKELNRSRDIRIKYGNRKN SRLQFNKV 60

Qy 210 KVEDAGEYVCEAENILGKDTVGRGLYVNSVSTTLSSWSGHARKCNETAKSYCVNGGVCYY 269

|||||

Db 61 KVEDAGEYVCEAENILGKDTVGRGLYVNSVSTTLSSWSGHARKCNETAKSYCVNGGVCYY 120

Qy 270 IEGINQLSCKCPNGFFGQRCLEKLPLRLYMPDPKQSVL 307

|||||

Db 121 IEGINQLSCKCPNGFFGQRCLEKLPLRLYMPDPKQKHL 158

Search completed: January 14, 2004, 07:25:04

Job time : 40.9363 secs

GenCore version 5.1.6
Copyright (c) 1993 - 2004' Compugen Ltd.

OM protein - protein search, using sw model

Run on: January 14, 2004, 07:23:41 ; Search time 15.7643 Seconds
(without alignments)
885.707 Million cell updates/sec

Title: US-09-864-675-2
Perfect score: 1749
Sequence: 1 MRRDPAPGFSMLLFGVSLAC.....PGTGVSSSQWSTSPSTLDLN 330

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 328717 seqs, 42310858 residues

Total number of hits satisfying chosen parameters: 328717

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : Issued_Patents_AA:*
1: /cgn2_6/ptodata/1/iaa/5A_COMB.pep:*
2: /cgn2_6/ptodata/1/iaa/5B_COMB.pep:*
3: /cgn2_6/ptodata/1/iaa/6A_COMB.pep:*
4: /cgn2_6/ptodata/1/iaa/6B_COMB.pep:*
5: /cgn2_6/ptodata/1/iaa/PCTUS_COMB.pep:*
6: /cgn2_6/ptodata/1/iaa/backfiles1.pep:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query		DB	ID	Description
		Match	Length			
1	1722	98.5	330	2	US-08-525-864A-4	Sequence 4, Appli
2	1478	84.5	754	2	US-08-525-864A-2	Sequence 2, Appli
3	960	54.9	181	3	US-08-753-007A-4	Sequence 4, Appli
4	960	54.9	181	3	US-09-398-496-4	Sequence 4, Appli
5	881	50.4	469	3	US-08-753-007A-8	Sequence 8, Appli
6	881	50.4	469	3	US-09-398-496-8	Sequence 8, Appli
7	881	50.4	647	3	US-08-753-007A-32	Sequence 32, Appl
8	881	50.4	647	3	US-09-398-496-32	Sequence 32, Appl
9	842	48.1	407	3	US-08-753-007A-6	Sequence 6, Appli
10	842	48.1	407	3	US-09-398-496-6	Sequence 6, Appli
11	821	46.9	605	3	US-08-753-007A-2	Sequence 2, Appli

12	821	46.9	605	3	US-09-398-496-2	Sequence 2, Appli
13	748	42.8	139	3	US-08-753-007A-33	Sequence 33, Appl
14	748	42.8	139	3	US-09-398-496-33	Sequence 33, Appl
15	707	40.4	131	2	US-08-525-864A-6	Sequence 6, Appli
16	534.5	30.6	445	4	US-08-467-602-328	Sequence 328, App
17	534.5	30.6	479	4	US-08-467-602-370	Sequence 370, App
18	532.5	30.4	425	3	US-08-470-335-226	Sequence 226, App
19	532.5	30.4	425	4	US-08-467-602-320	Sequence 320, App
20	532.5	30.4	459	4	US-08-467-602-362	Sequence 362, App
21	532	30.4	414	3	US-08-470-339-188	Sequence 188, App
22	532	30.4	604	3	US-08-470-335-227	Sequence 227, App
23	532	30.4	604	4	US-08-467-602-318	Sequence 318, App
24	532	30.4	613	3	US-08-470-335-230	Sequence 230, App
25	532	30.4	613	4	US-08-467-602-329	Sequence 329, App
26	532	30.4	624	4	US-08-467-602-326	Sequence 326, App
27	532	30.4	633	4	US-08-467-602-335	Sequence 335, App
28	532	30.4	638	4	US-08-467-602-360	Sequence 360, App
29	532	30.4	647	4	US-08-467-602-371	Sequence 371, App
30	532	30.4	658	4	US-08-467-602-368	Sequence 368, App
31	532	30.4	667	4	US-08-467-602-377	Sequence 377, App
32	532	30.4	821	3	US-08-470-335-228	Sequence 228, App
33	532	30.4	821	4	US-08-467-602-319	Sequence 319, App
34	532	30.4	830	3	US-08-470-335-231	Sequence 231, App
35	532	30.4	830	4	US-08-467-602-330	Sequence 330, App
36	532	30.4	841	4	US-08-467-602-327	Sequence 327, App
37	532	30.4	850	4	US-08-467-602-336	Sequence 336, App
38	532	30.4	855	4	US-08-467-602-361	Sequence 361, App
39	532	30.4	864	4	US-08-467-602-372	Sequence 372, App
40	532	30.4	868	3	US-08-470-335-229	Sequence 229, App
41	532	30.4	868	4	US-08-467-602-317	Sequence 317, App
42	532	30.4	875	4	US-08-467-602-369	Sequence 369, App
43	532	30.4	877	3	US-08-470-335-232	Sequence 232, App
44	532	30.4	877	4	US-08-467-602-331	Sequence 331, App
45	532	30.4	884	4	US-08-467-602-378	Sequence 378, App

ALIGNMENTS

RESULT 1

US-08-525-864A-4

; Sequence 4, Application US/08525864A

; Patent No. 5912326

; GENERAL INFORMATION:

; APPLICANT: Chang, Han

; TITLE OF INVENTION: Cerebellum-derived Growth Factors, and Uses

; TITLE OF INVENTION: Related thereto

; NUMBER OF SEQUENCES: 18

; CORRESPONDENCE ADDRESS:

; ADDRESSEE: LAHIVE & COCKFIELD

; STREET: 28 State Street

; CITY: Boston

; STATE: Massachusetts

; COUNTRY: USA

; ZIP: 02109

; COMPUTER READABLE FORM:

; MEDIUM TYPE: Floppy disk


```

; TITLE OF INVENTION: Cerebellum-derived Growth Factors, and Uses
; TITLE OF INVENTION: Related thereto
; NUMBER OF SEQUENCES: 18
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: LAHIVE & COCKFIELD
; STREET: 28 State Street
; CITY: Boston
; STATE: Massachusetts
; COUNTRY: USA
; ZIP: 02109
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: AscII (text)
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/525,864A
; FILING DATE: 8-SEP-1995
; CLASSIFICATION: 530
; ATTORNEY/AGENT INFORMATION:
; NAME: Kara, Catherine J.
; REGISTRATION NUMBER: 41,106
; REFERENCE/DOCKET NUMBER: HUI-017
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (617)227-7400
; TELEFAX: (617)742-4214
; INFORMATION FOR SEQ ID NO: 2:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 754 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
US-08-525-864A-2

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Query Match          84.5%; Score 1478; DB 2; Length 754;
Best Local Similarity 96.2%; Pred. No. 3e-125;
Matches 278; Conservative 5; Mismatches 6; Indels 0; Gaps 0;

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Db    121 PVDPNGKNIKKEVGKILCTDCATRPKLKKMKSQTGEVGEKQSLKCEAAAGNPQPSYRWFK 180

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Db    181 DGKELNRSRDIRIKYGNRKNRSLQFNKVKVEDAGEYVCEAENILGKDTVGRGLHVNSVS 240

Qy    241 TTLSSWSGHARKCNETAKSYCVNGGVVCYYIEGINQLSCKCPNGFFGQRC 289
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Db    241 TTLSSWSGHARKCNETAKSYCVNGGVVCYYIEGINQLSCKCPVGYTGDR 289

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RESULT 3
 US-08-753-007A-4
 ; Sequence 4, Application US/08753007A
 ; Patent No. 6074841
 ; GENERAL INFORMATION:
 ; APPLICANT: Gearing, David P.
 ; APPLICANT: Busfield, Samantha J.
 ; TITLE OF INVENTION: DON-1 GENE AND POLYPEPTIDES
 ; TITLE OF INVENTION: AND USES THEREFOR
 ; NUMBER OF SEQUENCES: 33
 ; CORRESPONDENCE ADDRESS:
 ; ADDRESSEE: Fish & Richardson P.C.
 ; STREET: 225 Franklin Street
 ; CITY: Boston
 ; STATE: MA
 ; COUNTRY: US
 ; ZIP: 02110-2804
 ; COMPUTER READABLE FORM:
 ; MEDIUM TYPE: Diskette
 ; COMPUTER: IBM Compatible
 ; OPERATING SYSTEM: DOS
 ; SOFTWARE: FastSEQ Version 2.0
 ; CURRENT APPLICATION DATA:
 ; APPLICATION NUMBER: US/08/753,007A
 ; FILING DATE: 19-NOV-1996
 ; CLASSIFICATION: 536
 ; PRIOR APPLICATION DATA:
 ; APPLICATION NUMBER: 08/699,591
 ; FILING DATE: 19-AUG-1996
 ; ATTORNEY/AGENT INFORMATION:
 ; NAME: Fasse, J. Peter
 ; REGISTRATION NUMBER: 32,983
 ; REFERENCE/DOCKET NUMBER: 07334/022001
 ; TELECOMMUNICATION INFORMATION:
 ; TELEPHONE: 617-542-5070
 ; TELEFAX: 617-542-8906
 ; TELEX:
 ; INFORMATION FOR SEQ ID NO: 4:
 ; SEQUENCE CHARACTERISTICS:
 ; LENGTH: 181 amino acids
 ; TYPE: amino acid
 ; STRANDEDNESS: not relevant
 ; TOPOLOGY: linear
 ; MOLECULE TYPE: protein
 ; FRAGMENT TYPE: internal
 US-08-753-007A-4

Query Match 54.9%; Score 960; DB 3; Length 181;
 Best Local Similarity 97.8%; Pred. No. 3.1e-79;
 Matches 177; Conservative 3; Mismatches 1; Indels 0; Gaps 0;

Qy 150 MKSQTGQVGEKQSLKCEAAAGNPQPSYRWFKDGKELNRSRDIRIKYGNGRKN SRLQFNKV 209
 |||||:|||||
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Qy 210 KVEDAGEYVCEAENILGKDTVGRGLYVNSVSTTLSSWSGHARKCNETAKSYCVNGGVCYY 269
 :|||||:|||||
 Db 61 RVEDAGEYVCEAENILGKDTVGRGLHVNSVSTTLSSWSGHARKCNETAKSYCVNGGVCYY 120

Qy 270 IEGINQLSCKCPNGFFGQRCLEKLPLRLYMPDPKQSVLWDTPGTGVSSSQWSTSPSTLDL 329
 :|||||:|||||
 Db 121 IEGINQLSCKCPNGFFGQRCLEKLPLRLYMPDPKQSVLWDTPGTGVSSSQWSTSPSTLDL 180

Qy 330 N 330
 |
 Db 181 N 181

RESULT 4

US-09-398-496-4

; Sequence 4, Application US/09398496

; Patent No. 6133423

; GENERAL INFORMATION:

; APPLICANT: Gearing, David P.

; APPLICANT: Busfield, Samantha J.

; TITLE OF INVENTION: DON-1 GENE AND POLYPEPTIDES

; TITLE OF INVENTION: AND USES THEREFOR

; NUMBER OF SEQUENCES: 33

; CORRESPONDENCE ADDRESS:

; ADDRESSEE: Fish & Richardson P.C.

; STREET: 225 Franklin Street

; CITY: Boston

; STATE: MA

; COUNTRY: US

; ZIP: 02110-2804

; COMPUTER READABLE FORM:

; MEDIUM TYPE: Diskette

; COMPUTER: IBM Compatible

; OPERATING SYSTEM: DOS

; SOFTWARE: FastSEQ Version 2.0

; CURRENT APPLICATION DATA:

; APPLICATION NUMBER: US/09/398,496

; FILING DATE:

; CLASSIFICATION:

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: 08/753,007

; FILING DATE: 19-NOV-1996

; APPLICATION NUMBER: 08/699,591

; FILING DATE: 19-AUG-1996

; ATTORNEY/AGENT INFORMATION:

; NAME: Fasse, J. Peter

; REGISTRATION NUMBER: 32,983

; REFERENCE/DOCKET NUMBER: 07334/022001

; TELECOMMUNICATION INFORMATION:

; TELEPHONE: 617-542-5070

; TELEFAX: 617-542-8906

; TELEX:

; INFORMATION FOR SEQ ID NO: 4:

; SEQUENCE CHARACTERISTICS:

; LENGTH: 181 amino acids

; TYPE: amino acid

; STRANDEDNESS: not relevant

; REGISTRATION NUMBER: 32,983
 ; REFERENCE/DOCKET NUMBER: 07334/022001
 ; TELECOMMUNICATION INFORMATION:
 ; TELEPHONE: 617-542-5070
 ; TELEFAX: 617-542-8906
 ; TELEX:
 ; INFORMATION FOR SEQ ID NO: 8:
 ; SEQUENCE CHARACTERISTICS:
 ; LENGTH: 469 amino acids
 ; TYPE: amino acid
 ; STRANDEDNESS: not relevant
 ; TOPOLOGY: linear
 ; MOLECULE TYPE: protein
 ; FRAGMENT TYPE: internal
 US-08-753-007A-8

Query Match 50.4%; Score 881; DB 3; Length 469;
 Best Local Similarity 100.0%; Pred. No. 1.6e-71;
 Matches 163; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy	142	ATRPKLKKMKSQTGQVGEKQSLKCEAAAGNPQPSYRWFKDGGKELNRSRDIRIKYGNRKN	201
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Qy	202	SRLQFNKVKVEDAGEYVCEAENILGKDTVGRGLVNSVSTTLSSWSGHARKCNETAKSYC	261
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RESULT 6

US-09-398-496-8

; Sequence 8, Application US/09398496
 ; Patent No. 6133423
 ; GENERAL INFORMATION:
 ; APPLICANT: Gearing, David P.
 ; APPLICANT: Busfield, Samantha J.
 ; TITLE OF INVENTION: DON-1 GENE AND POLYPEPTIDES
 ; TITLE OF INVENTION: AND USES THEREFOR
 ; NUMBER OF SEQUENCES: 33
 ; CORRESPONDENCE ADDRESS:
 ; ADDRESSEE: Fish & Richardson P.C.
 ; STREET: 225 Franklin Street
 ; CITY: Boston
 ; STATE: MA
 ; COUNTRY: US
 ; ZIP: 02110-2804
 ; COMPUTER READABLE FORM:
 ; MEDIUM TYPE: Diskette
 ; COMPUTER: IBM Compatible
 ; OPERATING SYSTEM: DOS
 ; SOFTWARE: FastSEQ Version 2.0
 ; CURRENT APPLICATION DATA:
 ; APPLICATION NUMBER: US/09/398,496

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; FILING DATE:
; CLASSIFICATION:
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 08/753,007
; FILING DATE: 19-NOV-1996
; APPLICATION NUMBER: 08/699,591
; FILING DATE: 19-AUG-1996
; ATTORNEY/AGENT INFORMATION:
; NAME: Fasse, J. Peter
; REGISTRATION NUMBER: 32,983
; REFERENCE/DOCKET NUMBER: 07334/022001
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 617-542-5070
; TELEFAX: 617-542-8906
; TELEX:
; INFORMATION FOR SEQ ID NO: 8:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 469 amino acids
; TYPE: amino acid
; STRANDEDNESS: not relevant
; TOPOLOGY: linear
; MOLECULE TYPE: protein
; FRAGMENT TYPE: internal
US-09-398-496-8

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Query Match          50.4%; Score 881; DB 3; Length 469;
Best Local Similarity 100.0%; Pred. No. 1.6e-71;
Matches 163; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Db      31 ATRPKLKKMKSQTGQVGEKQSLKCEAAAGNPQPSYRWFKDGKELNRSRDIRIKYGNRKN 90

Qy      202 SRLQFNKVKVEDAGEYVCEAENILGKDTVGRGLYVNSVSTTLSSWSGHARKCNETAKSYC 261
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      91 SRLQFNKVKVEDAGEYVCEAENILGKDTVGRGLYVNSVSTTLSSWSGHARKCNETAKSYC 150

Qy      262 VNGGVCYYIEGINQLSCKCPNGFFGQRCLEKLPLRLYMPDPKQ 304
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      151 VNGGVCYYIEGINQLSCKCPNGFFGQRCLEKLPLRLYMPDPKQ 193

```

```

RESULT 7
US-08-753-007A-32
; Sequence 32, Application US/08753007A
; Patent No. 6074841
; GENERAL INFORMATION:
; APPLICANT: Gearing, David P.
; APPLICANT: Busfield, Samantha J.
; TITLE OF INVENTION: DON-1 GENE AND POLYPEPTIDES
; TITLE OF INVENTION: AND USES THEREFOR
; NUMBER OF SEQUENCES: 33
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Fish & Richardson P.C.
; STREET: 225 Franklin Street
; CITY: Boston
; STATE: MA

```

```

; COUNTRY: US
; ZIP: 02110-2804
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Diskette
; COMPUTER: IBM Compatible
; OPERATING SYSTEM: DOS
; SOFTWARE: FastSEQ Version 2.0
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/753,007A
; FILING DATE: 19-NOV-1996
; CLASSIFICATION: 536
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 08/699,591
; FILING DATE: 19-AUG-1996
; ATTORNEY/AGENT INFORMATION:
; NAME: Fasse, J. Peter
; REGISTRATION NUMBER: 32,983
; REFERENCE/DOCKET NUMBER: 07334/022001
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 617-542-5070
; TELEFAX: 617-542-8906
; TELEX:
; INFORMATION FOR SEQ ID NO: 32:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 647 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: protein
; FRAGMENT TYPE: internal
US-08-753-007A-32

```

```

Query Match          50.4%; Score 881; DB 3; Length 647;
Best Local Similarity 100.0%; Pred. No. 2.4e-71;
Matches 163; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

```

```

Qy      142 ATRPKLKKMKSQTGQVGEKQSLKCEAAAGNPQPSYRWFKDGKELNRSRDIRIKYGNRKN 201
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      31 ATRPKLKKMKSQTGQVGEKQSLKCEAAAGNPQPSYRWFKDGKELNRSRDIRIKYGNRKN 90

Qy      202 SRLQFNKVKVEDAGEYVCEAENILGKDTVGRGLYVNSVSTTLSSWSGHARKCNETAKSYC 261
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      91 SRLQFNKVKVEDAGEYVCEAENILGKDTVGRGLYVNSVSTTLSSWSGHARKCNETAKSYC 150

Qy      262 VNGGVCYYIEGINQLSCKCPNGFFGQRCLEKLPLRLYMPDPKQ 304
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      151 VNGGVCYYIEGINQLSCKCPNGFFGQRCLEKLPLRLYMPDPKQ 193

```

```

RESULT 8
US-09-398-496-32
; Sequence 32, Application US/09398496
; Patent No. 6133423
; GENERAL INFORMATION:
; APPLICANT: Gearing, David P.
; APPLICANT: Busfield, Samantha J.
; TITLE OF INVENTION: DON-1 GENE AND POLYPEPTIDES

```

```

; TITLE OF INVENTION:  AND USES THEREFOR
; NUMBER OF SEQUENCES:  33
; CORRESPONDENCE ADDRESS:
; ADDRESSEE:  Fish & Richardson P.C.
; STREET:  225 Franklin Street
; CITY:  Boston
; STATE:  MA
; COUNTRY:  US
; ZIP:  02110-2804
; COMPUTER READABLE FORM:
; MEDIUM TYPE:  Diskette
; COMPUTER:  IBM Compatible
; OPERATING SYSTEM:  DOS
; SOFTWARE:  FastSEQ Version 2.0
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER:  US/09/398,496
; FILING DATE:
; CLASSIFICATION:
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER:  08/753,007
; FILING DATE:  19-NOV-1996
; APPLICATION NUMBER:  08/699,591
; FILING DATE:  19-AUG-1996
; ATTORNEY/AGENT INFORMATION:
; NAME:  Fasse, J. Peter
; REGISTRATION NUMBER:  32,983
; REFERENCE/DOCKET NUMBER:  07334/022001
; TELECOMMUNICATION INFORMATION:
; TELEPHONE:  617-542-5070
; TELEFAX:  617-542-8906
; TELEX:
; INFORMATION FOR SEQ ID NO:  32:
; SEQUENCE CHARACTERISTICS:
; LENGTH:  647 amino acids
; TYPE:  amino acid
; STRANDEDNESS:  single
; TOPOLOGY:  linear
; MOLECULE TYPE:  protein
; FRAGMENT TYPE:  internal
US-09-398-496-32

```

```

Query Match          50.4%;  Score 881;  DB 3;  Length 647;
Best Local Similarity 100.0%;  Pred. No. 2.4e-71;
Matches 163;  Conservative  0;  Mismatches  0;  Indels  0;  Gaps  0;

```

```

Qy      142  ATRPKLKKMKSQTGQVG EKQSLKCEAAAGNPQPSYRWFKDGKELNRSRDIRIKYGNRKN 201
          |||
Db      31  ATRPKLKKMKSQTGQVG EKQSLKCEAAAGNPQPSYRWFKDGKELNRSRDIRIKYGNRKN 90

Qy      202  SRLQFNKVKVEDAGEYVCEAENILGKDTVGRGLVNSVSTTLSSWSGHARKCNETAKSYC 261
          |||
Db      91  SRLQFNKVKVEDAGEYVCEAENILGKDTVGRGLVNSVSTTLSSWSGHARKCNETAKSYC 150

Qy      262  VNGGVCYYIEGINQLSCKCPNGFFGQRCLEKLPLRLYMPDPKQ 304
          |||
Db      151  VNGGVCYYIEGINQLSCKCPNGFFGQRCLEKLPLRLYMPDPKQ 193

```

RESULT 9
 US-08-753-007A-6
 ; Sequence 6, Application US/08753007A
 ; Patent No. 6074841
 ; GENERAL INFORMATION:
 ; APPLICANT: Gearing, David P.
 ; APPLICANT: Busfield, Samantha J.
 ; TITLE OF INVENTION: DON-1 GENE AND POLYPEPTIDES
 ; TITLE OF INVENTION: AND USES THEREFOR
 ; NUMBER OF SEQUENCES: 33
 ; CORRESPONDENCE ADDRESS:
 ; ADDRESSEE: Fish & Richardson P.C.
 ; STREET: 225 Franklin Street
 ; CITY: Boston
 ; STATE: MA
 ; COUNTRY: US
 ; ZIP: 02110-2804
 ; COMPUTER READABLE FORM:
 ; MEDIUM TYPE: Diskette
 ; COMPUTER: IBM Compatible
 ; OPERATING SYSTEM: DOS
 ; SOFTWARE: FastSEQ Version 2.0
 ; CURRENT APPLICATION DATA:
 ; APPLICATION NUMBER: US/08/753,007A
 ; FILING DATE: 19-NOV-1996
 ; CLASSIFICATION: 536
 ; PRIOR APPLICATION DATA:
 ; APPLICATION NUMBER: 08/699,591
 ; FILING DATE: 19-AUG-1996
 ; ATTORNEY/AGENT INFORMATION:
 ; NAME: Fasse, J. Peter
 ; REGISTRATION NUMBER: 32,983
 ; REFERENCE/DOCKET NUMBER: 07334/022001
 ; TELECOMMUNICATION INFORMATION:
 ; TELEPHONE: 617-542-5070
 ; TELEFAX: 617-542-8906
 ; TELEX:
 ; INFORMATION FOR SEQ ID NO: 6:
 ; SEQUENCE CHARACTERISTICS:
 ; LENGTH: 407 amino acids
 ; TYPE: amino acid
 ; STRANDEDNESS: not relevant
 ; TOPOLOGY: linear
 ; MOLECULE TYPE: protein
 ; FRAGMENT TYPE: internal
 US-08-753-007A-6

Query Match 48.1%; Score 842; DB 3; Length 407;
 Best Local Similarity 98.7%; Pred. No. 4.4e-68;
 Matches 156; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

Qy 150 MKSQTGQVGEEKQSLKCEAAAGNPQPSYRWFKDGKELNRSRDIRIKYGNGRKN SRLQFNKV 209
 ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
 Db 1 MKSQTGQVGEEKQSLKCEAAAGNPQPSYRWFKDGKELNRSRDIRIKYGNGRKN SRLQFNKV 60
 Qy 210 KVEDAGEYVCEAENILGKDTVGRGLYVNSVSTTLSSWSGHARKCNETAKSYCVNGGVCYY 269

```

Db          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
61 KVEDAGEYVCEAENILGKDTVGRGLYVNSVSTTLSSWSGHARKCNETAKSYCVNGGVCYY 120

QY          270 IEGINQLSCKCPNGFFGQRCLEKLPLRLYMPDPKQSVL 307
          ||||||||||||||||||||||||||||||||||||
Db          121 IEGINQLSCKCPNGFFGQRCLEKLPLRLYMPDPKQKHL 158

```

RESULT 10

US-09-398-496-6

; Sequence 6, Application US/09398496

; Patent No. 6133423

; GENERAL INFORMATION:

; APPLICANT: Gearing, David P.

; APPLICANT: Busfield, Samantha J.

; TITLE OF INVENTION: DON-1 GENE AND POLYPEPTIDES

; TITLE OF INVENTION: AND USES THEREFOR

; NUMBER OF SEQUENCES: 33

; CORRESPONDENCE ADDRESS:

; ADDRESSEE: Fish & Richardson P.C.

; STREET: 225 Franklin Street

; CITY: Boston

; STATE: MA

; COUNTRY: US

; ZIP: 02110-2804

; COMPUTER READABLE FORM:

; MEDIUM TYPE: Diskette

; COMPUTER: IBM Compatible

; OPERATING SYSTEM: DOS

; SOFTWARE: FastSEQ Version 2.0

; CURRENT APPLICATION DATA:

; APPLICATION NUMBER: US/09/398,496

; FILING DATE:

; CLASSIFICATION:

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: 08/753,007

; FILING DATE: 19-NOV-1996

; APPLICATION NUMBER: 08/699,591

; FILING DATE: 19-AUG-1996

; ATTORNEY/AGENT INFORMATION:

; NAME: Fasse, J. Peter

; REGISTRATION NUMBER: 32,983

; REFERENCE/DOCKET NUMBER: 07334/022001

; TELECOMMUNICATION INFORMATION:

; TELEPHONE: 617-542-5070

; TELEFAX: 617-542-8906

; TELEX:

; INFORMATION FOR SEQ ID NO: 6:

; SEQUENCE CHARACTERISTICS:

; LENGTH: 407 amino acids

; TYPE: amino acid

; STRANDEDNESS: not relevant

; TOPOLOGY: linear

; MOLECULE TYPE: protein

; FRAGMENT TYPE: internal

US-09-398-496-6

Query Match 48.1%; Score 842; DB 3; Length 407;
 Best Local Similarity 98.7%; Pred. No. 4.4e-68;
 Matches 156; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

```

Qy      150 MKSQTGQVGEKQSLKCEAAAGNPQPSYRWFKDGKELNRSRDIRIKYGNRKN SRLQFNKV 209
          |||
Db      1   MKSQTGQVGEKQSLKCEAAAGNPQPSYRWFKDGKELNRSRDIRIKYGNRKN SRLQFNKV 60

Qy      210 KVEDAGEYVCEAENILGKDTVGRGLYVNSVSTTLSSWSGHARKCNETAKSYCVNGGVCYY 269
          |||
Db      61 KVEDAGEYVCEAENILGKDTVGRGLYVNSVSTTLSSWSGHARKCNETAKSYCVNGGVCYY 120

Qy      270 IEGINQLSCKCPNGFFGQRCLEKLPLRLYMPDPKQSVL 307
          |||
Db      121 IEGINQLSCKCPNGFFGQRCLEKLPLRLYMPDPKQKHL 158
  
```

RESULT 11

US-08-753-007A-2

; Sequence 2, Application US/08753007A

; Patent No. 6074841

; GENERAL INFORMATION:

; APPLICANT: Gearing, David P.

; APPLICANT: Busfield, Samantha J.

; TITLE OF INVENTION: DON-1 GENE AND POLYPEPTIDES

; TITLE OF INVENTION: AND USES THEREFOR

; NUMBER OF SEQUENCES: 33

; CORRESPONDENCE ADDRESS:

; ADDRESSEE: Fish & Richardson P.C.

; STREET: 225 Franklin Street

; CITY: Boston

; STATE: MA

; COUNTRY: US

; ZIP: 02110-2804

; COMPUTER READABLE FORM:

; MEDIUM TYPE: Diskette

; COMPUTER: IBM Compatible

; OPERATING SYSTEM: DOS

; SOFTWARE: FastSEQ Version 2.0

; CURRENT APPLICATION DATA:

; APPLICATION NUMBER: US/08/753,007A

; FILING DATE: 19-NOV-1996

; CLASSIFICATION: 536

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: 08/699,591

; FILING DATE: 19-AUG-1996

; ATTORNEY/AGENT INFORMATION:

; NAME: Fasse, J. Peter

; REGISTRATION NUMBER: 32,983

; REFERENCE/DOCKET NUMBER: 07334/022001

; TELECOMMUNICATION INFORMATION:

; TELEPHONE: 617-542-5070

; TELEFAX: 617-542-8906

; TELEX:

; INFORMATION FOR SEQ ID NO: 2:

; SEQUENCE CHARACTERISTICS:

; LENGTH: 605 amino acids


```
;      TYPE:      amino acid
;      STRANDEDNESS:  not relevant
;      TOPOLOGY:   linear
;      MOLECULE TYPE:  protein
;      FRAGMENT TYPE: internal
US-08-753-007A-2
```

RESULT 12

; REGISTRATION NUMBER: 32,983
 ; REFERENCE/DOCKET NUMBER: 07334/022001
 ; TELECOMMUNICATION INFORMATION:
 ; TELEPHONE: 617-542-5070
 ; TELEFAX: 617-542-8906
 ; TELEX:
 ; INFORMATION FOR SEQ ID NO: 2:
 ; SEQUENCE CHARACTERISTICS:
 ; LENGTH: 605 amino acids
 ; TYPE: amino acid
 ; STRANDEDNESS: not relevant
 ; TOPOLOGY: linear
 ; MOLECULE TYPE: protein
 ; FRAGMENT TYPE: internal
 US-09-398-496-2

Query Match 46.9%; Score 821; DB 3; Length 605;
 Best Local Similarity 97.4%; Pred. No. 5.9e-66;
 Matches 151; Conservative 3; Mismatches 1; Indels 0; Gaps 0;

Qy 150 MKSQTGQVGEKQSLKCEAAAGNPQPSYRWFKDGKELNRSRDIRIKYGNRKN SRLQFNKV 209
 |||||:|||||
 Db 1 MKSQTGEVGEKQSLKCEAAAGNPQPSYRWFKDGKELNRSRDIRIKYGNVRKN SRLQFNKV 60
 Qy 210 KVEDAGEYVCEAENILGKDTVGRGLYVNSVSTTLSSWSGHARKCNETAKSYCVNGGVCYY 269
 :|||||:|||||
 Db 61 RVEDAGEYVCEAENILGKDTVGRGLHVNSVSTTLSSWSGHARKCNETAKSYCVNGGVCYY 120
 Qy 270 IEGINQLSCKCPNGFFGQRCLEKLPLRLYMPDPKQ 304
 |||||
 Db 121 IEGINQLSCKCPNGFFGQRCLEKLPLRLYMPDPKQ 155

RESULT 13

US-08-753-007A-33
 ; Sequence 33, Application US/08753007A
 ; Patent No. 6074841
 ; GENERAL INFORMATION:
 ; APPLICANT: Gearing, David P.
 ; APPLICANT: Busfield, Samantha J.
 ; TITLE OF INVENTION: DON-1 GENE AND POLYPEPTIDES
 ; TITLE OF INVENTION: AND USES THEREFOR
 ; NUMBER OF SEQUENCES: 33
 ; CORRESPONDENCE ADDRESS:
 ; ADDRESSEE: Fish & Richardson P.C.
 ; STREET: 225 Franklin Street
 ; CITY: Boston
 ; STATE: MA
 ; COUNTRY: US
 ; ZIP: 02110-2804
 ; COMPUTER READABLE FORM:
 ; MEDIUM TYPE: Diskette
 ; COMPUTER: IBM Compatible
 ; OPERATING SYSTEM: DOS
 ; SOFTWARE: FastSEQ Version 2.0
 ; CURRENT APPLICATION DATA:
 ; APPLICATION NUMBER: US/08/753,007A

```

; FILING DATE: 19-NOV-1996
; CLASSIFICATION: 536
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 08/699,591
; FILING DATE: 19-AUG-1996
; ATTORNEY/AGENT INFORMATION:
; NAME: Fasse, J. Peter
; REGISTRATION NUMBER: 32,983
; REFERENCE/DOCKET NUMBER: 07334/022001
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 617-542-5070
; TELEFAX: 617-542-8906
; TELEX:
; INFORMATION FOR SEQ ID NO: 33:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 139 amino acids
; TYPE: amino acid
; STRANDEDNESS: not relevant
; TOPOLOGY: linear
; MOLECULE TYPE: protein
US-08-753-007A-33

```

```

Query Match          42.8%; Score 748; DB 3; Length 139;
Best Local Similarity 98.6%; Pred. No. 3.2e-60;
Matches 137; Conservative 2; Mismatches 0; Indels 0; Gaps 0;

```

```

Qy      192 RIKYGNRKNRLQFNKVKVEDAGEYVCEAENILGKDTVGRGLVNSVSTTLSSWSGHAR 251
          |||||:|||||:|||||
Db      1  RIKYGNRKNRLQFNKVRVEDAGEYVCEAENILGKDTVGRGLHVNVSSTTLSSWSGHAR 60

Qy      252 KCNETAKSYCVNGGVCYYIEGINQLSCKCPNGFFGQRCLEKLPLRLYMPDPKQSVLWDTP 311
          |||||:|||||:|||||
Db      61 KCNETAKSYCVNGGVCYYIEGINQLSCKCPNGFFGQRCLEKLPLRLYMPDPKQSVLWDTP 120

Qy      312 GTGVSSSQWSTSPSTLDLN 330
          |||||
Db      121 GTGVSSSQWSTSPSTLDLN 139

```

RESULT 14

US-09-398-496-33

```

; Sequence 33, Application US/09398496
; Patent No. 6133423
; GENERAL INFORMATION:
; APPLICANT: Gearing, David P.
; APPLICANT: Busfield, Samantha J.
; TITLE OF INVENTION: DON-1 GENE AND POLYPEPTIDES
; TITLE OF INVENTION: AND USES THEREFOR
; NUMBER OF SEQUENCES: 33
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Fish & Richardson P.C.
; STREET: 225 Franklin Street
; CITY: Boston
; STATE: MA
; COUNTRY: US
; ZIP: 02110-2804
; COMPUTER READABLE FORM:

```

```

; MEDIUM TYPE: Diskette
; COMPUTER: IBM Compatible
; OPERATING SYSTEM: DOS
; SOFTWARE: FastSEQ Version 2.0
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/09/398,496
; FILING DATE:
; CLASSIFICATION:
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 08/753,007
; FILING DATE: 19-NOV-1996
; APPLICATION NUMBER: 08/699,591
; FILING DATE: 19-AUG-1996
; ATTORNEY/AGENT INFORMATION:
; NAME: Fasse, J. Peter
; REGISTRATION NUMBER: 32,983
; REFERENCE/DOCKET NUMBER: 07334/022001
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 617-542-5070
; TELEFAX: 617-542-8906
; TELEX:
; INFORMATION FOR SEQ ID NO: 33:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 139 amino acids
; TYPE: amino acid
; STRANDEDNESS: not relevant
; TOPOLOGY: linear
; MOLECULE TYPE: protein
US-09-398-496-33

```

```

Query Match          42.8%; Score 748; DB 3; Length 139;
Best Local Similarity 98.6%; Pred. No. 3.2e-60;
Matches 137; Conservative 2; Mismatches 0; Indels 0; Gaps 0;

```

```

Qy      192 RIKYGNRGRKNSRLQFNKVKVEDAGEYVCEAENILGKDTVGRRLVNSVSTTLSSWSGHAR 251
          |||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||
Db      1 RIKYGNRGRKNSRLQFNKVRVEDAGEYVCEAENILGKDTVGRRLHVNSVSTTLSSWSGHAR 60

Qy      252 KCNETAKSYCVNGGVCYYIEGINQLSCKCPNGFFGQRCLEKLPLRLYMPDPKQSVLWDT 311
          |||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||
Db      61 KCNETAKSYCVNGGVCYYIEGINQLSCKCPNGFFGQRCLEKLPLRLYMPDPKQSVLWDT 120

Qy      312 GTGVSSSQWSTSPSTLDLN 330
          |||:|||||:|||||:|||||:|||||:|||||:|||||:|||||
Db      121 GTGVSSSQWSTSPSTLDLN 139

```

RESULT 15

US-08-525-864A-6

```

; Sequence 6, Application US/08525864A
; Patent No. 5912326

```

; GENERAL INFORMATION:

```

; APPLICANT: Chang, Han
; TITLE OF INVENTION: Cerebellum-derived Growth Factors, and Uses
; TITLE OF INVENTION: Related thereto
; NUMBER OF SEQUENCES: 18
; CORRESPONDENCE ADDRESS:

```

```

; ADDRESSEE: LAHIVE & COCKFIELD
; STREET: 28 State Street
; CITY: Boston
; STATE: Massachusetts
; COUNTRY: USA
; ZIP: 02109
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: AscII (text)
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/525,864A
; FILING DATE: 8-SEP-1995
; CLASSIFICATION: 530
; ATTORNEY/AGENT INFORMATION:
; NAME: Kara, Catherine J.
; REGISTRATION NUMBER: 41,106
; REFERENCE/DOCKET NUMBER: HUI-017
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (617)227-7400
; TELEFAX: (617)742-4214
; INFORMATION FOR SEQ ID NO: 6:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 131 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
US-08-525-864A-6

```

```

Query Match          40.4%; Score 707; DB 2; Length 131;
Best Local Similarity 99.2%; Pred. No. 1.5e-56;
Matches 130; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

```

```

Qy      200 KNSRLQFNKVKVEDAGEYVCEAENILGKDTVGRGLVNSVSTTLSSWSGHARKCNETAKS 259
          |||:|||||
Db      1  KNSRLQFNKVKVEDAGEYVCEAENILGKDTVGRGLHVNSVSTTLSSWSGHARKCNETAKS 60

Qy      260 YCVNGGVCYYIEGINQLSCKCPNGFFGQRCLEKLPLRLYMPDPKQSVLWDTPGTGVSSSQ 319
          |||:|||||
Db      61 YCVNGGVCYYIEGINQLSCKCPNGFFGQRCLEKLPLRLYMPDPKQSVLWDTPGTGVSSSQ 120

Qy      320 WSTSPSTLDLN 330
          |||
Db      121 WSTSPSTLDLN 131

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Search completed: January 14, 2004, 07:28:17
Job time : 16.7643 secs

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GenCore version 5.1.6
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OM protein - protein search, using sw model

Run on: January 14, 2004, 07:27:01 ; Search time 30.4777 Seconds
(without alignments)
2214.038 Million cell updates/sec

Title: US-09-864-675-2
Perfect score: 1749
Sequence: 1 MRRDPAPGFMSMLLFGVSLAC.....PGTGVSSSQWSTSPSTLDLN 330

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 762491 seqs, 204481190 residues

Total number of hits satisfying chosen parameters: 762491

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : Published Applications_AA:*

- 1: /cgn2_6/ptodata/1/pubpaa/US07_PUBCOMB.pep:*
- 2: /cgn2_6/ptodata/1/pubpaa/PCT_NEW_PUB.pep:*
- 3: /cgn2_6/ptodata/1/pubpaa/US06_NEW_PUB.pep:*
- 4: /cgn2_6/ptodata/1/pubpaa/US06_PUBCOMB.pep:*
- 5: /cgn2_6/ptodata/1/pubpaa/US07_NEW_PUB.pep:*
- 6: /cgn2_6/ptodata/1/pubpaa/PCTUS_PUBCOMB.pep:*
- 7: /cgn2_6/ptodata/1/pubpaa/US08_NEW_PUB.pep:*
- 8: /cgn2_6/ptodata/1/pubpaa/US08_PUBCOMB.pep:*
- 9: /cgn2_6/ptodata/1/pubpaa/US09A_PUBCOMB.pep:*
- 10: /cgn2_6/ptodata/1/pubpaa/US09B_PUBCOMB.pep:*
- 11: /cgn2_6/ptodata/1/pubpaa/US09C_PUBCOMB.pep:*
- 12: /cgn2_6/ptodata/1/pubpaa/US09_NEW_PUB.pep:*
- 13: /cgn2_6/ptodata/1/pubpaa/US10A_PUBCOMB.pep:*
- 14: /cgn2_6/ptodata/1/pubpaa/US10B_PUBCOMB.pep:*
- 15: /cgn2_6/ptodata/1/pubpaa/US10C_PUBCOMB.pep:*
- 16: /cgn2_6/ptodata/1/pubpaa/US10_NEW_PUB.pep:*
- 17: /cgn2_6/ptodata/1/pubpaa/US60_NEW_PUB.pep:*
- 18: /cgn2_6/ptodata/1/pubpaa/US60_PUBCOMB.pep:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

8

Result	Query				
No.	Score	Match	Length	DB	ID
					Description

1	1749	100.0	330	9	US-09-864-675-2	Sequence 2, Appli
2	1505	86.0	298	9	US-09-864-675-4	Sequence 4, Appli
3	960	54.9	181	14	US-10-096-241-4	Sequence 4, Appli
4	881	50.4	469	14	US-10-096-241-8	Sequence 8, Appli
5	881	50.4	647	14	US-10-096-241-32	Sequence 32, Appl
6	842	48.1	407	14	US-10-096-241-6	Sequence 6, Appli
7	821	46.9	605	14	US-10-096-241-2	Sequence 2, Appli
8	748	42.8	139	14	US-10-096-241-33	Sequence 33, Appl
9	523	29.9	422	7	US-08-736-019-170	Sequence 170, App
10	521	29.8	418	9	US-09-795-668-3	Sequence 3, Appli
11	521	29.8	418	9	US-09-795-686-3	Sequence 3, Appli
12	521	29.8	418	10	US-09-946-807-3	Sequence 3, Appli
13	354	20.2	204	9	US-09-795-668-4	Sequence 4, Appli
14	354	20.2	204	9	US-09-795-686-4	Sequence 4, Appli
15	354	20.2	204	10	US-09-946-807-4	Sequence 4, Appli
16	305	17.4	163	9	US-09-795-668-5	Sequence 5, Appli
17	305	17.4	163	9	US-09-795-686-5	Sequence 5, Appli
18	305	17.4	163	10	US-09-946-807-5	Sequence 5, Appli
19	304	17.4	501	15	US-10-290-578-10	Sequence 10, Appl
20	304	17.4	768	9	US-09-773-517-11	Sequence 11, Appl
21	304	17.4	768	9	US-09-792-025-11	Sequence 11, Appl
22	304	17.4	768	9	US-09-849-868-11	Sequence 11, Appl
23	304	17.4	768	10	US-09-808-602-85	Sequence 85, Appl
24	304	17.4	768	12	US-10-453-183-11	Sequence 11, Appl
25	304	17.4	768	15	US-10-290-578-2	Sequence 2, Appli
26	296	16.9	192	9	US-09-795-668-2	Sequence 2, Appli
27	296	16.9	192	9	US-09-795-686-2	Sequence 2, Appli
28	296	16.9	192	10	US-09-946-807-2	Sequence 2, Appli
29	293.5	16.8	456	9	US-09-795-668-17	Sequence 17, Appl
30	293.5	16.8	456	9	US-09-795-686-17	Sequence 17, Appl
31	293.5	16.8	456	10	US-09-946-807-17	Sequence 17, Appl
32	293.5	16.8	632	9	US-09-795-668-16	Sequence 16, Appl
33	293.5	16.8	632	9	US-09-795-686-16	Sequence 16, Appl
34	293.5	16.8	632	10	US-09-946-807-16	Sequence 16, Appl
35	293.5	16.8	669	9	US-09-773-517-1	Sequence 1, Appli
36	293.5	16.8	669	9	US-09-792-025-1	Sequence 1, Appli
37	293.5	16.8	669	9	US-09-849-868-1	Sequence 1, Appli
38	293.5	16.8	669	12	US-10-453-183-1	Sequence 1, Appli
39	293.5	16.8	669	15	US-10-022-609-11	Sequence 11, Appl
40	286	16.4	422	14	US-10-096-241-9	Sequence 9, Appli
41	285.5	16.3	239	9	US-09-795-668-18	Sequence 18, Appl
42	285.5	16.3	239	9	US-09-795-686-18	Sequence 18, Appl
43	285.5	16.3	239	10	US-09-946-807-18	Sequence 18, Appl
44	285.5	16.3	629	9	US-09-795-668-14	Sequence 14, Appl
45	285.5	16.3	629	9	US-09-795-686-14	Sequence 14, Appl

ALIGNMENTS

RESULT 1

US-09-864-675-2

; Sequence 2, Application US/09864675

; Patent No. US20020081286A1

; GENERAL INFORMATION:

; APPLICANT: Marchionni, Mark

```

; TITLE OF INVENTION: NRG-2 NUCLEIC ACID MOLECULES,
; TITLE OF INVENTION: POLYPEPTIDES, AND DIAGNOSTIC AND THERAPEUTIC METHODS
; FILE REFERENCE: 04585/049002
; CURRENT APPLICATION NUMBER: US/09/864,675
; CURRENT FILING DATE: 2001-05-23
; PRIOR APPLICATION NUMBER: US 60/206,495
; PRIOR FILING DATE: 2000-05-23
; NUMBER OF SEQ ID NOS: 18
; SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 2
; LENGTH: 330
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-864-675-2

```

```

Query Match          100.0%; Score 1749; DB 9; Length 330;
Best Local Similarity 100.0%; Pred. No. 2e-135;
Matches 330; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

```

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Qy      1 MRRDPAPGFSMLLFGVSLACYSPLKSVQDQAYKAPVVVEGKVQGLVPAGGSSSNSTREP 60
        |||
Db      1 MRRDPAPGFSMLLFGVSLACYSPLKSVQDQAYKAPVVVEGKVQGLVPAGGSSSNSTREP 60

Qy      61 PASGRVALVKVLDKWPLRSGGLQREQVISVGSCVPLERNQRYIFFLEPTEQPLVFKTAFA 120
        |||
Db      61 PASGRVALVKVLDKWPLRSGGLQREQVISVGSCVPLERNQRYIFFLEPTEQPLVFKTAFA 120

Qy      121 PLDTNGKNLKKEVGKILCTDCATRPKLKKMKSQTGQVGEKQSLKCEAAAGNPQPSYRWFK 180
        |||
Db      121 PLDTNGKNLKKEVGKILCTDCATRPKLKKMKSQTGQVGEKQSLKCEAAAGNPQPSYRWFK 180

Qy      181 DGKELNRSRDIRIKYGNRKNRSLQFNKVKVEDAGEYVCEAENILGKDTVGRGLYVNSVS 240
        |||
Db      181 DGKELNRSRDIRIKYGNRKNRSLQFNKVKVEDAGEYVCEAENILGKDTVGRGLYVNSVS 240

Qy      241 TTLSSWSGHARKCNETAKSYCVNGGVVCYYIEGINQLSCKCPNGFFGQRCLEKLPLRLYMP 300
        |||
Db      241 TTLSSWSGHARKCNETAKSYCVNGGVVCYYIEGINQLSCKCPNGFFGQRCLEKLPLRLYMP 300

Qy      301 DPKQSVLWDTPGTGVSSSQWSTSPSTLDLN 330
        |||
Db      301 DPKQSVLWDTPGTGVSSSQWSTSPSTLDLN 330

```

RESULT 2

US-09-864-675-4

```

; Sequence 4, Application US/09864675
; Patent No. US20020081286A1
; GENERAL INFORMATION:
; APPLICANT: Marchionni, Mark
; TITLE OF INVENTION: NRG-2 NUCLEIC ACID MOLECULES,
; TITLE OF INVENTION: POLYPEPTIDES, AND DIAGNOSTIC AND THERAPEUTIC METHODS
; FILE REFERENCE: 04585/049002
; CURRENT APPLICATION NUMBER: US/09/864,675
; CURRENT FILING DATE: 2001-05-23
; PRIOR APPLICATION NUMBER: US 60/206,495
; PRIOR FILING DATE: 2000-05-23

```


; NUMBER OF SEQ ID NOS: 18
; SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 4
; LENGTH: 298
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-864-675-4

Query Match 86.0%; Score 1505; DB 9; Length 298;
Best Local Similarity 98.6%; Pred. No. 1.8e-115;
Matches 285; Conservative 1; Mismatches 3; Indels 0; Gaps 0;

```
Qy      1 MRRDPAPGFSMLLFGVSLACYSPLKSVQDQAYKAPVVVEGKVQGLVPAGGSSSNSTREP 60
        ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      1 MRRDPAPGFSMLLFGVSLACYSPLKSVQDQAYKAPVVVEGKVQGLVPAGGSSSNSTREP 60

Qy     61 PASGRVALVKVLDKWPLRSGGLQREQVISVGSCVPLERNQRYIFFLEPTEQPLVFKTAFA 120
        ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     61 PASGRVALVKVLDKWPLRSGGLQREQVISVGSCVPLERNQRYIFFLEPTEQPLVFKTAFA 120

Qy    121 PLDTNGKNLKKKEVGKILCTDCATRPKLKKMKSQTGQVGEKQSLKCEAAAGNPQPSYRWFK 180
        ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    121 PLDTNGKNLKKKEVGKILCTDCATRPKLKKMKSQTGQVGEKQSLKCEAAAGNPQPSYRWFK 180

Qy    181 DGKELNRSRDIRIKYGNRKNRSLQFNKVKVEDAGEYVCEAENILGKDTVGRGLYVNSVS 240
        ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    181 DGKELNRSRDIRIKYGNRKNRSLQFNKVKVEDAGEYVCEAENILGKDTVGRGLYVNSVS 240

Qy    241 TTLSSWSGHARKCNETAKSYCVNGGVCYYIEGINQLSCKCPNGFFGQRC 289
        ||||||||||||||||||||||||||||||||||||||||| : | ||
Db    241 TTLSSWSGHARKCNETAKSYCVNGGVCYYIEGINQLSCKCPVGYTGDR 289
```

RESULT 3

US-10-096-241-4

; Sequence 4, Application US/10096241
; Publication No. US20020127594A1
; GENERAL INFORMATION:
; APPLICANT: Gearing, David P.
; Busfield, Samantha J.
; TITLE OF INVENTION: DON-1 GENE AND POLYPEPTIDES
; AND USES THEREFOR
; NUMBER OF SEQUENCES: 33
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Fish & Richardson P.C.
; STREET: 225 Franklin Street
; CITY: Boston
; STATE: MA
; COUNTRY: US
; ZIP: 02110-2804
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Diskette
; COMPUTER: IBM Compatible
; OPERATING SYSTEM: DOS
; SOFTWARE: FastSEQ Version 2.0
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/10/096,241

```

; FILING DATE: 12-Mar-2002
; CLASSIFICATION: <Unknown>
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 08/699,591
; FILING DATE: 19-AUG-1996
; ATTORNEY/AGENT INFORMATION:
; NAME: Fasse, J. Peter
; REGISTRATION NUMBER: 32,983
; REFERENCE/DOCKET NUMBER: 07334/022001
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 617-542-5070
; TELEFAX: 617-542-8906
; TELEX: <Unknown>
; INFORMATION FOR SEQ ID NO: 4:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 181 amino acids
; TYPE: amino acid
; STRANDEDNESS: not relevant
; TOPOLOGY: linear
; MOLECULE TYPE: protein
; FRAGMENT TYPE: internal
; SEQUENCE DESCRIPTION: SEQ ID NO: 4:
US-10-096-241-4

```

```

Query Match          54.9%; Score 960; DB 14; Length 181;
Best Local Similarity 97.8%; Pred. No. 5.1e-71;
Matches 177; Conservative 3; Mismatches 1; Indels 0; Gaps 0;

```

```

QY      150 MKSQTGQVGEKQSLKCEAAAGNPQPSYRWFKDGKELNRSRDIRIKYGNGRKNSRLQFNKV 209
        |||||:|||||
Db       1  MKSQTGEVGEKQSLKCEAAAGNPQPSYRWFKDGKELNRSRDIRIKYGNVRKNSRLQFNKV 60

QY      210 KVEDAGEYVCEAENILGKDTVGRGLYVNSVSTTLSSWSGHARKCNETAKSYCVNGGVCYY 269
        :|||||:|||||
Db       61 RVEDAGEYVCEAENILGKDTVGRGLHVNSVSTTLSSWSGHARKCNETAKSYCVNGGVCYY 120

QY      270 IEGINQLSCKCPNGFFGQRCLEKLPLRLYMPDPKQSVLWDTPGTGVSSSQWSTSPSTLDL 329
        |||||
Db       121 IEGINQLSCKCPNGFFGQRCLEKLPLRLYMPDPKQSVLWDTPGTGVSSSQWSTSPSTLDL 180

QY      330 N 330
        |
Db       181 N 181

```

RESULT 4

US-10-096-241-8

; Sequence 8, Application US/10096241

; Publication No. US20020127594A1

; GENERAL INFORMATION:

; APPLICANT: Gearing, David P.

; Busfield, Samantha J.

; TITLE OF INVENTION: DON-1 GENE AND POLYPEPTIDES

; AND USES THEREFOR

; NUMBER OF SEQUENCES: 33

; CORRESPONDENCE ADDRESS:

; ADDRESSEE: Fish & Richardson P.C.

```

; STREET: 225 Franklin Street
; CITY: Boston
; STATE: MA
; COUNTRY: US
; ZIP: 02110-2804
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Diskette
; COMPUTER: IBM Compatible
; OPERATING SYSTEM: DOS
; SOFTWARE: FastSEQ Version 2.0
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/10/096,241
; FILING DATE: 12-Mar-2002
; CLASSIFICATION: <Unknown>
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 08/699,591
; FILING DATE: 19-AUG-1996
; ATTORNEY/AGENT INFORMATION:
; NAME: Fasse, J. Peter
; REGISTRATION NUMBER: 32,983
; REFERENCE/DOCKET NUMBER: 07334/022001
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 617-542-5070
; TELEFAX: 617-542-8906
; TELEX: <Unknown>
; INFORMATION FOR SEQ ID NO: 8:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 469 amino acids
; TYPE: amino acid
; STRANDEDNESS: not relevant
; TOPOLOGY: linear
; MOLECULE TYPE: protein
; FRAGMENT TYPE: internal
; SEQUENCE DESCRIPTION: SEQ ID NO: 8:
US-10-096-241-8

```

```

Query Match          50.4%; Score 881; DB 14; Length 469;
Best Local Similarity 100.0%; Pred. No. 5.2e-64;
Matches 163; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

```

```

Qy      142 ATRPKLKKMKSQTGQVGEKQSLKCEAAAGNPQPSYRWFKDGKELNRSRDIRIKYGNRKN 201
          |||
Db      31 ATRPKLKKMKSQTGQVGEKQSLKCEAAAGNPQPSYRWFKDGKELNRSRDIRIKYGNRKN 90
          |||

Qy      202 SRLQFNKVKVEDAGEYVCEAENILGKDTVGRGLYVNSVSTTLSSWSGHARKCNETAKSYC 261
          |||
Db      91 SRLQFNKVKVEDAGEYVCEAENILGKDTVGRGLYVNSVSTTLSSWSGHARKCNETAKSYC 150
          |||

Qy      262 VNGGVCYYIEGINQLSCKCPNGFFGQRCLEKLPLRLYMPDPKQ 304
          |||
Db      151 VNGGVCYYIEGINQLSCKCPNGFFGQRCLEKLPLRLYMPDPKQ 193
          |||

```

```

RESULT 5
US-10-096-241-32
; Sequence 32, Application US/10096241
; Publication No. US20020127594A1

```

```

; GENERAL INFORMATION:
;   APPLICANT: Gearing, David P.
;             Busfield, Samantha J.
;   TITLE OF INVENTION: DON-1 GENE AND POLYPEPTIDES
;                       AND USES THEREFOR
;   NUMBER OF SEQUENCES: 33
;   CORRESPONDENCE ADDRESS:
;       ADDRESSEE: Fish & Richardson P.C.
;       STREET: 225 Franklin Street
;       CITY: Boston
;       STATE: MA
;       COUNTRY: US
;       ZIP: 02110-2804
;   COMPUTER READABLE FORM:
;       MEDIUM TYPE: Diskette
;       COMPUTER: IBM Compatible
;       OPERATING SYSTEM: DOS
;       SOFTWARE: FastSEQ Version 2.0
;   CURRENT APPLICATION DATA:
;       APPLICATION NUMBER: US/10/096,241
;       FILING DATE: 12-Mar-2002
;       CLASSIFICATION: <Unknown>
;   PRIOR APPLICATION DATA:
;       APPLICATION NUMBER: 08/699,591
;       FILING DATE: 19-AUG-1996
;   ATTORNEY/AGENT INFORMATION:
;       NAME: Fasse, J. Peter
;       REGISTRATION NUMBER: 32,983
;       REFERENCE/DOCKET NUMBER: 07334/022001
;   TELECOMMUNICATION INFORMATION:
;       TELEPHONE: 617-542-5070
;       TELEFAX: 617-542-8906
;       TELEX: <Unknown>
;   INFORMATION FOR SEQ ID NO: 32:
;       SEQUENCE CHARACTERISTICS:
;           LENGTH: 647 amino acids
;           TYPE: amino acid
;           STRANDEDNESS: single
;           TOPOLOGY: linear
;       MOLECULE TYPE: protein
;       FRAGMENT TYPE: internal
;       SEQUENCE DESCRIPTION: SEQ ID NO: 32:
US-10-096-241-32

```

```

Query Match          50.4%; Score 881; DB 14; Length 647;
Best Local Similarity 100.0%; Pred. No. 7.9e-64;
Matches 163; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

```

```

Qy      142 ATRPKLKKMKSQTGQVGEKQSLKCEAAAGNPQPSYRWFKDGGKELNRSRDIRIKYGNRKN 201
          |||
Db      31 ATRPKLKKMKSQTGQVGEKQSLKCEAAAGNPQPSYRWFKDGGKELNRSRDIRIKYGNRKN 90

Qy      202 SRLQFNKVKVEDAGEYVCEAENILGKDTVGRGLVNSVSTTLSSWSGHARKCNETAKSYC 261
          |||
Db      91 SRLQFNKVKVEDAGEYVCEAENILGKDTVGRGLVNSVSTTLSSWSGHARKCNETAKSYC 150

Qy      262 VNGGVCYYIEGINQLSCKCPNGFFGQRCLEKLPLRLYMPDPKQ 304

```

Db 151 VNGGVCYYIEGINQLSCKCPNGFFGQRCLEKLPLRLYMPDPKQ 193

RESULT 6

US-10-096-241-6

; Sequence 6, Application US/10096241

; Publication No. US20020127594A1

; GENERAL INFORMATION:

; APPLICANT: Gearing, David P.

; Busfield, Samantha J.

; TITLE OF INVENTION: DON-1 GENE AND POLYPEPTIDES
; AND USES THEREFOR

; NUMBER OF SEQUENCES: 33

; CORRESPONDENCE ADDRESS:

; ADDRESSEE: Fish & Richardson P.C.

; STREET: 225 Franklin Street

; CITY: Boston

; STATE: MA

; COUNTRY: US

; ZIP: 02110-2804

; COMPUTER READABLE FORM:

; MEDIUM TYPE: Diskette

; COMPUTER: IBM Compatible

; OPERATING SYSTEM: DOS

; SOFTWARE: FastSEQ Version 2.0

; CURRENT APPLICATION DATA:

; APPLICATION NUMBER: US/10/096,241

; FILING DATE: 12-Mar-2002

; CLASSIFICATION: <Unknown>

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: 08/699,591

; FILING DATE: 19-AUG-1996

; ATTORNEY/AGENT INFORMATION:

; NAME: Fasse, J. Peter

; REGISTRATION NUMBER: 32,983

; REFERENCE/DOCKET NUMBER: 07334/022001

; TELECOMMUNICATION INFORMATION:

; TELEPHONE: 617-542-5070

; TELEFAX: 617-542-8906

; TELEX: <Unknown>

; INFORMATION FOR SEQ ID NO: 6:

; SEQUENCE CHARACTERISTICS:

; LENGTH: 407 amino acids

; TYPE: amino acid

; STRANDEDNESS: not relevant

; TOPOLOGY: linear

; MOLECULE TYPE: protein

; FRAGMENT TYPE: internal

; SEQUENCE DESCRIPTION: SEQ ID NO: 6:

US-10-096-241-6

Query Match 48.1%; Score 842; DB 14; Length 407;

Best Local Similarity 98.7%; Pred. No. 6.9e-61;

Matches 156; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

Qy 150 MKSQTGQVGEKQSLKCEAAAGNPQPSYRWFKDGKELNRSRDIRIKYGNRKN SRLQFNKV 209

```

Db      1 MKSQTGQVGEKQSLKCEAAAGNPQPSYRWFKDGKELNRSRDIRIKYGNGRKN SRLQFNKV 60
Qy      210 KVEDAGEYVCEAENILGKDTVGRGLYVNSVSTTLSSWSGHARKCNETAKSYCVNGGVCYY 269
Db      61 KVEDAGEYVCEAENILGKDTVGRGLYVNSVSTTLSSWSGHARKCNETAKSYCVNGGVCYY 120
Qy      270 IEGINQLSCKCPNGFFGQRCLEKLPLRLYMPDPKQSVL 307
Db      121 IEGINQLSCKCPNGFFGQRCLEKLPLRLYMPDPKQKHL 158

```

RESULT 7

US-10-096-241-2

```

; Sequence 2, Application US/10096241
; Publication No. US20020127594A1
; GENERAL INFORMATION:
; APPLICANT: Gearing, David P.
; Busfield, Samantha J.
; TITLE OF INVENTION: DON-1 GENE AND POLYPEPTIDES
; AND USES THEREFOR
; NUMBER OF SEQUENCES: 33
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Fish & Richardson P.C.
; STREET: 225 Franklin Street
; CITY: Boston
; STATE: MA
; COUNTRY: US
; ZIP: 02110-2804
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Diskette
; COMPUTER: IBM Compatible
; OPERATING SYSTEM: DOS
; SOFTWARE: FastSEQ Version 2.0
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/10/096,241
; FILING DATE: 12-Mar-2002
; CLASSIFICATION: <Unknown>
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 08/699,591
; FILING DATE: 19-AUG-1996
; ATTORNEY/AGENT INFORMATION:
; NAME: Fasse, J. Peter
; REGISTRATION NUMBER: 32,983
; REFERENCE/DOCKET NUMBER: 07334/022001
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 617-542-5070
; TELEFAX: 617-542-8906
; TELEX: <Unknown>
; INFORMATION FOR SEQ ID NO: 2:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 605 amino acids
; TYPE: amino acid
; STRANDEDNESS: not relevant
; TOPOLOGY: linear
; MOLECULE TYPE: protein
; FRAGMENT TYPE: internal

```

; SEQUENCE DESCRIPTION: SEQ ID NO: 2:
US-10-096-241-2

Query Match 46.9%; Score 821; DB 14; Length 605;
Best Local Similarity 97.4%; Pred. No. 6.1e-59;
Matches 151; Conservative 3; Mismatches 1; Indels 0; Gaps 0;

```
Qy      150 MKSQTGQVGEKQSLKCEAAAGNPQPSYRWFKDGGKELNRSRDIRIKYGNRKN SRLQFNKV 209
          |||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:
Db      1   MKSQTGEVGEKQSLKCEAAAGNPQPSYRWFKDGGKELNRSRDIRIKYGNVRKN SRLQFNKV 60

Qy      210 KVEDAGEYVCEAENILGKDTVGRGLYVNSVSTTLSSWSGHARKCNETAKSYCVNGGVCYY 269
          :|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:
Db      61 RVEDAGEYVCEAENILGKDTVGRGLHVNSVSTTLSSWSGHARKCNETAKSYCVNGGVCYY 120

Qy      270 IEGINQLSCKCPNGFFGQRCLEKLPLRLYMPDPKQ 304
          .|||||:|||||:|||||:|||||:|||||:|||||:|||||:
Db      121 IEGINQLSCKCPNGFFGQRCLEKLPLRLYMPDPKQ 155
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RESULT 8

US-10-096-241-33

```
; Sequence 33, Application US/10096241
; Publication No. US20020127594A1
; GENERAL INFORMATION:
;   APPLICANT: Gearing, David P.
;               Busfield, Samantha J.
;   TITLE OF INVENTION: DON-1 GENE AND POLYPEPTIDES
;                       AND USES THEREFOR
;   NUMBER OF SEQUENCES: 33
;   CORRESPONDENCE ADDRESS:
;       ADDRESSEE: Fish & Richardson P.C.
;       STREET: 225 Franklin Street
;       CITY: Boston
;       STATE: MA
;       COUNTRY: US
;       ZIP: 02110-2804
;   COMPUTER READABLE FORM:
;       MEDIUM TYPE: Diskette
;       COMPUTER: IBM Compatible
;       OPERATING SYSTEM: DOS
;       SOFTWARE: FastSEQ Version 2.0
;   CURRENT APPLICATION DATA:
;       APPLICATION NUMBER: US/10/096,241
;       FILING DATE: 12-Mar-2002
;       CLASSIFICATION: <Unknown>
;   PRIOR APPLICATION DATA:
;       APPLICATION NUMBER: 08/699,591
;       FILING DATE: 19-AUG-1996
;   ATTORNEY/AGENT INFORMATION:
;       NAME: Fasse, J. Peter
;       REGISTRATION NUMBER: 32,983
;       REFERENCE/DOCKET NUMBER: 07334/022001
;   TELECOMMUNICATION INFORMATION:
;       TELEPHONE: 617-542-5070
;       TELEFAX: 617-542-8906
;       TELEX: <Unknown>
```

```

; INFORMATION FOR SEQ ID NO: 33:
;     SEQUENCE CHARACTERISTICS:
;         LENGTH: 139 amino acids
;         TYPE: amino acid
;         STRANDEDNESS: not relevant
;         TOPOLOGY: linear
;     MOLECULE TYPE: protein
;     SEQUENCE DESCRIPTION: SEQ ID NO: 33:
US-10-096-241-33

```

```

Query Match          42.8%;  Score 748;  DB 14;  Length 139;
Best Local Similarity 98.6%;  Pred. No. 9e-54;
Matches 137;  Conservative 2;  Mismatches 0;  Indels 0;  Gaps 0;

```

```

Qy      192 RIKYGNRKN SRLQFNKVKVEDAGEYVCEAENILGKDTVGRRLVNSVSTTLSSWSGHAR 251
          |||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||
Db      1  RIKYGNRKN SRLQFNKVRVEDAGEYVCEAENILGKDTVGRRLHVNSVSTTLSSWSGHAR 60

Qy      252 KCNETAKSYCVNGGVCYYIEGINQLSCKCPNGFFGQRCLEKLPLRLYMPDPKQSVLWDTP 311
          |||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||
Db      61 KCNETAKSYCVNGGVCYYIEGINQLSCKCPNGFFGQRCLEKLPLRLYMPDPKQSVLWDTP 120

Qy      312 GTGVSSSQWSTSPSTLDLN 330
          |||:|||||:|||||:|||||:|||||:|||||:|||||:|||||
Db      121 GTGVSSSQWSTSPSTLDLN 139

```

RESULT 9

US-08-736-019-170

; Sequence 170, Application US/08736019

; Publication No. US20030207799A1

; GENERAL INFORMATION:

; APPLICANT: Goodearl, Andrew

; APPLICANT: Stroobant, Paul

; APPLICANT: Minghetti, Luisa

; APPLICANT: Waterfield, Michael

; APPLICANT: Marchionni, Mark

; APPLICANT: Chen, Mario

; APPLICANT: Hiles, Ian

; TITLE OF INVENTION: GLIAL MITOGENIC FACTORS, THEIR

; TITLE OF INVENTION: PREPARATION AND USE

; NUMBER OF SEQUENCES: 189

; CORRESPONDENCE ADDRESS:

; ADDRESSEE: Clark & Elbing LLP

; STREET: 176 Federal Street

; CITY: Boston

; STATE: Massachusetts

; COUNTRY: U.S.A.

; ZIP: 02110

; COMPUTER READABLE FORM:

; MEDIUM TYPE: 3.5" Diskette, 1.44 Mb

; COMPUTER: IBM Compatible Pentium

; OPERATING SYSTEM: Windows95

; SOFTWARE: FastSeq Version 2.0

; CURRENT APPLICATION DATA:

; APPLICATION NUMBER: US/08/736,019

; FILING DATE: 22-OCT-1996

Qy 189 ---RDIRIKYGNRKN SRLQFNKVKVEDAGEYVCEAENILGKDTVGRGLYVNSVSTTLSS 245
 :|:|: |: | |: || : |:| |: : || |: : : | :|
 Db 296 NKPQNIQKKPGK--SELRINKASLADSGEYMCKVISKLGND SASANITIVESNATSTS 353
 Qy 246 WSG--HARKCNETAKSYCVNGGVCYYIEGINQLS---CKCPNGFFGQRC 289
 :| | || | |:| || |: : : : | |||| | ||
 Db 354 TTGTSHLVKCAEKEKTFVCVNGGECFMVKDLSNPSRYLCKCPNEFTGDRC 402

RESULT 10

US-09-795-668-3

; Sequence 3, Application US/09795668
 ; Patent No. US20020045577A1
 ; GENERAL INFORMATION:
 ; APPLICANT: Stefansson, Hreinn
 ; APPLICANT: Steinthorsdottir, Valgerdur
 ; APPLICANT: Gulcher, Jeffrey R.
 ; TITLE OF INVENTION: HUMAN SCHIZOPHRENIA GENE
 ; FILE REFERENCE: 2345.2004-001
 ; CURRENT APPLICATION NUMBER: US/09/795,668
 ; CURRENT FILING DATE: 2001-02-28
 ; PRIOR APPLICATION NUMBER: US 09/515,716
 ; PRIOR FILING DATE: 2000-02-28
 ; NUMBER OF SEQ ID NOS: 1531
 ; SOFTWARE: FastSEQ for Windows Version 4.0
 ; SEQ ID NO 3
 ; LENGTH: 418
 ; TYPE: PRT
 ; ORGANISM: Homo sapiens
 US-09-795-668-3

Query Match 29.8%; Score 521; DB 9; Length 418;
 Best Local Similarity 35.2%; Pred. No. 1.6e-34;
 Matches 122; Conservative 59; Mismatches 90; Indels 76; Gaps 12;

Qy 15 GVSLACYSPSLKSVQDQAYKAPVVVEGKV-----QGLV-----PAGGSSS--NSTREPP 61
 | |: | ||: |||: | :| ||: ||| | | : | | : ||||
 Db 56 GASV-CSPPSVGSGVQELAQRAAVVIEGKVHPQRRQQGALDRKAAAAAGEAGAWGGDREPP 114
 Qy 62 ASGRVA-----LVKVLDKWPLRSGGLQRE 85
 |:| | |||| | :||:|:|:|:|
 Db 115 AAGPRALGPPAEPELLAANGTVPSWPTAPVPSAGEPGEEAPYLVKVHVQVWAVKAGGLKKD 174
 Qy 86 QVISV-----GSCVPLERNQRYIFFLEP-----TEQPLVFKTAFAPLDTNGKNLK 130
 :|| | || |: : ||||:| | : | |: :| ||:| |:| |
 Db 175 SLLTVRLGTWGHFAFPSCGRLKEDSRYIFFMEPDANSTSRAPAAFRASFPPLET-GRNLK 233
 Qy 131 KEVGKILCTDCATRPKLKKMKSQTGQVGEKQSLKCEAAAGNPQPSYRWFKDGKELNRS-- 188
 ||| :|| | | |:|:| || | | |:| : :||:| | ||
 Db 234 KEVSRVLCKRCALPPRLKEMKSQESAAGSKLVLRCESSSEYSSLRFKWFKNELNRKNK 293
 Qy 189 -RDIRIKYGNRKN SRLQFNKVKVEDAGEYVCEAENILGKDTVGRGLYVNSVSTTLSSWS 247
 :|:|: |: | |: || : |:| |: : || |: : : | :| :
 Db 294 PQNIQKKPGK--SELRINKASLADSGEYMCKVISKLGND SASANITIVESNATSTSTT 351
 Qy 248 G--HARKCNETAKSYCVNGGVCYYIEGINQLS---CKCPNGFFGQRC 289


```
; APPLICANT: Steinthorsdottir, Valgerdur
; APPLICANT: Gulcher, Jeffrey R.
; TITLE OF INVENTION: HUMAN SCHIZOPHRENIA GENE
; FILE REFERENCE: 2345.2004-001
; CURRENT APPLICATION NUMBER: US/09/795,668
; CURRENT FILING DATE: 2001-02-28
; PRIOR APPLICATION NUMBER: US 09/515,716
; PRIOR FILING DATE: 2000-02-28
; NUMBER OF SEQ ID NOS: 1531
; SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 4
; LENGTH: 204
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-795-668-4
```

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Query Match          20.2%; Score 354; DB 9; Length 204;
Best Local Similarity 40.7%; Pred. No. 3.2e-21;
Matches 70; Conservative 35; Mismatches 57; Indels 10; Gaps 4;
```

```
Qy      126 GKNLKKEVGKILCTDCATRPKLKKMKSQTGQVGEEKSLKCEAAAGNPQPSYRWFKD GKEL 185
      |:|||||::|| || |:|:|||| | | |:|: :: ::|||:| ||
Db      1 GRNLKKEVSRVLCRKRCALPRLKEMKSQESAAGSKLVLCETSSEYSSLRFKWFKN GNEL 60

Qy      186 NRS---RDIRIKYGNRKNRSLQFNKVVEDAGEYVCEAENILGKDTVGRGLYVNSVSTT 242
      || ::||: |: | |:| | : |:|:|: : || |: : : : |
Db      61 NRKNKPQNIKIQKKPGK--SELRINKASLADSGEYMCKVISKLGND SASANITIVESNAT 118

Qy      243 LSSWSG--HARKCNETAKSYCVNGGVCCYYIEGINQLS---CKCPNGFFGQRC 289
      :| :| | || | |:|:|||| |: :: :: | |||| | | ||
Db      119 STSTTGTSHLVKCAEKEKTFCVNGGECFMVKDLSNPSRYLCKCPNEFTGDRC 170
```

RESULT 14

```
US-09-795-686-4
; Sequence 4, Application US/09795686
; Patent No. US20020094954A1
; GENERAL INFORMATION:
; APPLICANT: Stefansson, Hreinn
; APPLICANT: Steinthorsdottir, Valgerdur
; APPLICANT: Gulcher, Jeffrey R.
; TITLE OF INVENTION: HUMAN SCHIZOPHRENIA GENE
; FILE REFERENCE: 2345.2005-001
; CURRENT APPLICATION NUMBER: US/09/795,686
; CURRENT FILING DATE: 2001-02-28
; PRIOR APPLICATION NUMBER: US 09/515,715
; PRIOR FILING DATE: 2000-02-28
; NUMBER OF SEQ ID NOS: 1531
; SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 4
; LENGTH: 204
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-795-686-4
```

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Query Match          20.2%; Score 354; DB 9; Length 204;
Best Local Similarity 40.7%; Pred. No. 3.2e-21;
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Matches 70; Conservative 35; Mismatches 57; Indels 10; Gaps 4;

```

Qy      126 GKNLKKEVGKILCTDCATRPKLKKMKSQTGQVGEKQSLKCEAAAGNPQPSYRWFKD GKEL 185
      |:||||| :|| || |:|:|||| | | |:| : : :|||:| ||
Db      1 GRNLKKEVSRVLCKRCALPPRLKEMKSQESAAGSKLVLCETSSSEYSSLRFKWFKN GNEL 60

Qy      186 NRS---RDIRIKYGNRKNRSLQFNKVKVEDAGEYVCEAENILGKDTVGRGLYVNSVSTT 242
      || :||:| :| | | :| :| :| :| :| :| :| :| :| :| :| :|
Db      61 NRKNKPQNIKIQQKPGK--SELRINKASLADSGEYMCKVISKLGND SASANITIVESNAT 118

Qy      243 LSSWSG--HARKCNETAKSYCVNGGVCYYIEGINQLS---CKCPNGFFGQRC 289
      :| :| | || | |:||||| |: : : :| | |||| | | ||
Db      119 STSTTGTSHLVKCAEKEKTFCVNGGECFMVKDLSNPSRYLCKCPNEFTGDRC 170

```

RESULT 15

US-09-946-807-4
; Sequence 4, Application US/09946807
; Patent No. US20020165144A1
; GENERAL INFORMATION:
; APPLICANT: Stefansson, Hreinn
; APPLICANT: Steinthorsdottir, Valgerdur
; APPLICANT: Gulcher, Jeffrey R.
; TITLE OF INVENTION: HUMAN SCHIZOPHRENIA GENE
; FILE REFERENCE: 2345.2004-001
; CURRENT APPLICATION NUMBER: US/09/946,807
; CURRENT FILING DATE: 2001-09-05
; PRIOR APPLICATION NUMBER: US/09/795,668
; PRIOR FILING DATE: 2001-02-28
; PRIOR APPLICATION NUMBER: US 09/515,716
; PRIOR FILING DATE: 2000-02-28
; NUMBER OF SEQ ID NOS: 1531
; SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 4
; LENGTH: 204
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-946-807-4

Query Match 20.2%; Score 354; DB 10; Length 204;
Best Local Similarity 40.7%; Pred. No. 3.2e-21;
Matches 70; Conservative 35; Mismatches 57; Indels 10; Gaps 4;

```

Qy      126 GKNLKKEVGKILCTDCATRPKLKKMKSQTGQVGEKQSLKCEAAAGNPQPSYRWFKD GKEL 185
      |:||||| :|| || |:|:|||| | | |:| : : :|||:| ||
Db      1 GRNLKKEVSRVLCKRCALPPRLKEMKSQESAAGSKLVLCETSSSEYSSLRFKWFKN GNEL 60

Qy      186 NRS---RDIRIKYGNRKNRSLQFNKVKVEDAGEYVCEAENILGKDTVGRGLYVNSVSTT 242
      || :||:| :| | | :| :| :| :| :| :| :| :| :| :| :| :|
Db      61 NRKNKPQNIKIQQKPGK--SELRINKASLADSGEYMCKVISKLGND SASANITIVESNAT 118

Qy      243 LSSWSG--HARKCNETAKSYCVNGGVCYYIEGINQLS---CKCPNGFFGQRC 289
      :| :| | || | |:||||| |: : : :| | |||| | | ||
Db      119 STSTTGTSHLVKCAEKEKTFCVNGGECFMVKDLSNPSRYLCKCPNEFTGDRC 170

```

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Job time : 31.4777 secs